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AUTHOR Riley, Gerald R.
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ABSTRACT

The Wichita Follow Through Project (Tucson Early Education Model) involved kindergarten through third grade pupils from low and middle income families in four elementary schools. The 1975-76 longitudinal evaluation was based primarily on results from the Iowa Tests of Basic Skills (grades three-six). Also included were the Metropolitan Readiness Test (first grade) and Metropolitan Achievement Test (second grade). The groups which had completed Follow Through generally achieved higher total grade equivalent gains than their comparison groups. As indicated by the 1975-76 evaluation, the Project may have long-term effects on achievement in basic skills. (Author)

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WICHITA PUBLIC SCHOOLS
Unified School District 259
Dr. Alvin E. Morris, Superintendent

FOLLOW THROUGH
PROGRAM EVALUATION

1975-76

Prepared by
Gerald R. Riley, Research Specialist
Graphics by Marge Crisman

Division of Research, Planning, and Development Services
Dr. A. W. Dirks, Director

January, 1977

FOLLOW THROUGH PROGRAM

EVALUATION

1975-76

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FOLLOW THROUGH PROGRAM EVALUATION
1975-76

SUMMARY

PROGRAM DESCRIPTION

Follow Through is a kindergarten through third grade program developed by the United States Office of Education to sustain and supplement, in the early grades, the experiences gained by children from low-income families who have had a full year of Head Start or a comparable preschool program. During the second year of operation the Wichita Follow Through Project adopted the Tucson Early Education Model (TEEM), an instructional model developed by the Arizona Center for Early Childhood Education, University of Arizona.

The program has been in operation in four Wichita elementary schools for the past eight years (1968-69 through 1975-76). The group of Follow Through pupils entering kindergarten the same year is called a cohort. The First Cohort entered kindergarten in September, 1968, completed Follow Through (third grade) in May, 1972, and completed sixth grade in May, 1975. The Eighth Cohort entered kindergarten in September, 1975.

The Follow Through evaluation plan includes five groups of pupils each year. Head Start Follow Through (HSFT) is the group for which the program was designed. Two groups were selected as comparison groups for HSFT: Head Start Non Follow Through (HSNFT), and a group of pupils who did not have Head Start or other preschool experience and were from low-income (LI) families. The neighborhood pupils of each Follow Through school (generally middle-class) who were placed in project classes comprise another group, Follow Through Classmates (FTCL). Pupils from non-Follow Through schools which generally match the socio-economic characteristics of the Follow Through schools were selected to form a non-low-income comparison group (NLI) for the FTCL group.

EVALUATION

The evaluation was based on standardized tests listed below which are given as part of the basic testing program of the Wichita Public Schools.

Grade one - Metropolitan Readiness Test
Grade two - Metropolitan Achievement Tests
Grades three through six - The Iowa Tests of Basic Skills

Test scores of those who have been in Follow Through, but are now in the upper elementary grades were analyzed to determine if long-term trends were apparent. Emphasis was placed on this longitudinal aspect of the evaluation.

The First Cohort, which was in the seventh grade this year, did not have additional testing. However, the data from last year for this cohort is included in this summary to give a more complete longitudinal picture of the program.

The Iowa Tests of Basic Skills (ITBS), subtest Work-Study Skills, is not given to third grade pupils. To make comparisons more valid, only the four subtests, Vocabulary, Reading, Language, and Mathematics, which were given every year, are included in the summary statements.

Total gains for each cohort are computed by subtracting the grade equivalents of each cohort's third grade ITBS subtests from the grade equivalents of their most recent ITBS. The groups which had finished

Follow Through (First, Second, Third, and Fourth Cohorts) had higher total gains than their non-Follow Through comparison groups on 69 percent of 48 total subtest computations. The groups were equal on 15 percent.

The four cohorts of the low-income Follow Through groups (HSFT) had higher total gains than the most comparable groups (HSNFT) on 88 percent of 16 ITBS subtest computations. The groups were equal on six percent of the subtests. The HSFT groups of Cohorts One, Two, and Four had higher total gains on all subtests. The HSFT group of Cohort Three was higher on two subtests. The HSFT groups had higher total gains than the other low-income comparison groups (LI) on 69 percent of the 16 subtests and were equal on 25 percent.

The non-low-income Follow Through groups (FTCL) had higher total gains than their comparison groups (NLI) on 50 percent of the 16 subtests and were equal on 13 percent.

The most recent testing of each of the first four cohorts showed that the HSFT groups had higher grade equivalents than the HSNFT groups on 50 percent of the 16 subtests and were equal on 19 percent. The FTCL groups had higher grade equivalents than the NLI groups on six percent of the subtests. The NLI groups were higher on the other 94 percent.

The other cohorts (Five, Six, and Seven) which were still in Follow Through generally scored lower than their non-Follow Through comparison groups. The HSFT groups had higher grade equivalent or percentile scores than HSNFT on 33 percent of the nine measures. The FTCL groups had higher scores on 11 percent. The evaluation does not include an LI group after the Fourth Cohort.

The first two cohorts have completed the sixth grade. This will probably complete the analysis of test results since further testing will not occur until the ninth grade. Data on these two cohorts show that over the three-year period (fourth through sixth grade), the low-income Follow Through groups had higher total gains on a majority of the ITBS subtests. Within the non-low-income Follow Through groups, only one of the two cohorts had higher total gains, thereby confounding the problem of drawing conclusions. As the Third and Fourth Cohorts complete the sixth grade it is possible that a trend will develop. There is, however, a strong indication that the Follow Through program is having a long-term positive effect on the achievement in basic skills of the low-income participants.

Summary test results for each cohort and parent participation totals are given in the charts on the following pages.

FIRST COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, FIVE, AND SIX

October 1971, October 1972, April 1974, and April 1975

GRADE EQUIVALENT COMPARISONS

	HSFT - HSNFT				HSFT - LI				FTCL - NLI			
GRADE LEVEL	3	4	5	6	3	4	5	6	3	4	5	6
Subtests												
VOCABULARY	N$^{(S)}$	N$^{(S)}$	N	N	N$^{(S)}$	N$^{(S)}$	N	N	N$^{(S)}$	N$^{(S)}$	N	N
READING	N	N	E	N	N	N$^{(S)}$	N	N	N$^{(S)}$	N	N$^{(S)}$	N
LANGUAGE	N$^{(S)}$	N	N	N	N$^{(S)}$	N	N	N	N$^{(S)}$	N	N	N$^{(S)}$
WORK-STUDY		N	N	N		N	N	N		N$^{(S)}$	N	N
MATHEMATICS	N$^{(S)}$	N	N	E	N$^{(S)}$	N	N	N	N$^{(S)}$	N	N	N
COMPOSITE	N$^{(S)}$	N$^{(S)}$	N	N	N$^{(S)}$	N$^{(S)}$	N	N	N$^{(S)}$	N$^{(S)}$	N$^{(S)}$	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E - Indicates the groups made equal grade equivalent scores.

N - Indicates the non-Follow Through group made the higher grade equivalent score.

(S) - Indicates the difference in group means was statistically significant. (Five chances or less in 100 that the difference in group means could occur by chance.)

FIRST COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, FIVE, AND SIX

October 1971, October 1972, April 1974, and April 1975

GRADE EQUIVALENT GAINS

	HSFT - HSNFT				HSFT - LI				FTCL - NLI			
GRADE LEVEL	3-4	4-5	5-6	Total	3-4	4-5	5-6	Total	3-4	4-5	5-6	Total
Subtests												
VOCABULARY	N	FT	N	FT	N	FT	N	E	E	FT	N	FT
READING	N	FT	N	FT	N	FT	N	E	FT	N	FT	FT
LANGUAGE	FT	FT	N	FT	FT	FT	N	FT	FT	N	N	E
WORK-STUDY		E	N			E	N			E	E	
MATHEMATICS	E	N	FT	FT	E	FT	E	FT	FT	N	FT	FT
COMPOSITE	FT	FT	E	FT	FT	FT	N	FT	FT	N	E	FT

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the greater gain.

E - Indicates the groups made equal gains.

N - Indicates the non-Follow Through group made the greater gain.

(S) - Indicates the difference in group gains was statistically significant. (Five chances or less in 100 that the difference in group gains could occur by chance.)

SECOND COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, FIVE, AND SIX

October 1972, April 1974, April 1975, and April 1976

GRADE EQUIVALENT COMPARISONS

	HSFT - HSNFT				HSFT - LI				FTCL - NLI			
GRADE LEVEL	3	4	5	6	3	4	5	6	3	4	5	6
Subtests												
VOCABULARY	FT	FT	FT	FT	FT	FT	FT	FT	N	N	N	N
READING	N	N	FT	FT	N	E	N	E	N	N	N	N
LANGUAGE	N	FT	FT	FT(s)	E	FT	FT	FT	FT	FT	N	FT
WORK-STUDY		E	FT	FT(s)		E	FT	E		N	N	N
MATHEMATICS	N	FT	FT	FT	N	FT	FT	E	N(s)	N	N	N
COMPOSITE	E	FT	FT	FT	E	FT	FT	FT	N	N	N	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E - Indicates the groups made equal grade equivalent scores.

N - Indicates the non-Follow Through group made the higher grade equivalent score.

(s) - Indicates the difference in group means was statistically significant. (Five chances or less in 100 that the difference in group means could occur by chance.)

SECOND COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE FOUR, FIVE, AND SIX

October 1972, April 1974, April 1975, and April 1976

GRADE EQUIVALENT GAINS

	HSFT - HSNFT				HSFT - L1				FTCL - NLI			
GRADE LEVEL	3-4	4-5	5-6	Total	3-4	4-5	5-6	Total	3-4	4-5	5-6	Total
Subtests												
VOCABULARY	FT	N	E	FT	FT	N	N	E	E	FT	N	N
READING	FT	FT	E	FT	FT	N	FT	FT	FT	N	N	N
LANGUAGE	FT	N (S)	FT (S)	FT (S)	FT	N	FT	FT	E	N	FT	FT
WORK-STUDY		FT (S)	FT			FT	N			N	FT	
MATHEMATICS	FT	FT	E	FT (S)	FT	E	N	FT	FT	E	N	N
COMPOSITE	FT	FT	FT	FT (S)	FT	E	E	FT	E	N	E	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the greater gain.

E - Indicates the groups made equal gains.

N - Indicates the non-Follow Through group made the greater gain.

(S) - Indicates the difference in group gains was statistically significant. (Five chances or less in 100 that the difference in group gains could occur by chance.)

THIRD COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, AND FIVE

April 1974, April 1975, and April 1976

GRADE EQUIVALENT COMPARISONS

	HSFT - HSNFT			HSFT - LI			FTCL - NLI		
GRADE LEVEL	3	4	5	3	4	5	3	4	5
Subtests									
VOCABULARY	FT	FT	FT	N	FT	N	N	FT	N
READING	FT	FT	FT	N	FT	E	N	N	N
LANGUAGE	FT	FT	FT	E	FT	FT	N	E	N
WORK-STUDY		FT	FT		FT(S)	FT		FT	N
MATHEMATICS	E	FT	N	E	FT	FT	N	N	N
COMPOSITE	FT	FT	FT	E	FT	FT	N	N	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E - Indicates the groups made equal grade equivalent scores.

N - Indicates the non-Follow Through group made the higher grade equivalent score.

(S) - Indicates the difference in group means was statistically significant. (Five chances or less in 100 that the difference in group means could occur by chance.)

THIRD COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, AND FIVE

April 1974, April 1975, and April 1976

GRADE EQUIVALENT GAINS

	HSFT - HSNFT			HSFT - LI			FTCL - NLI		
GRADE LEVEL	3-4	4-5	Total	3-4	4-5	Total	3-4	4-5	Total
Subtests									
VOCABULARY	N	FT	FT	FT	N	N	FT	N	E
READING	E	FT	FT	FT	N	FT	N	N	N
LANGUAGE	FT	E	E	FT	FT	FT$^{(S)}$	FT	N$^{(S)}$	N
WORK-STUDY		FT			N			N$^{(S)}$	
MATHEMATICS	FT	N	N	FT	N	E	FT	N	N
COMPOSITE	FT	FT	E	FT$^{(S)}$	N	FT	FT	N$^{(S)}$	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the greater gain.

E - Indicates the groups made equal gains.

N - Indicates the non-Follow Through group made the greater gain.

(S) - Indicates the difference in group gains was statistically significant. (Five chances or less in 100 that the difference in group gains could occur by chance.)

FOURTH COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE AND FOUR

April 1975 and April 1976

GRADE EQUIVALENT COMPARISONS

	HSFT - HSNFT		HSFT - LI		FTCL - NLI	
GRADE LEVEL	3	4	3	4	3	4
Subtests						
VOCABULARY	N	FT	N	N	N(s)	N
READING	N	E	N	FT	N(s)	N(s)
LANGUAGE	N	E	N	N	N(s)	N
WORK-STUDY	-	N	-	FT	-	N
MATHEMATICS	N(s)	E	N	N	N(s)	N
COMPOSITE	N	E	N	N	N(s)	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E - Indicates the groups made equal grade equivalent scores.

N - Indicates the non-Follow Through group made the higher grade equivalent score.

(s) - Indicates the difference in group means was statistically significant. (Five chances or less in 100 that the difference in group means could occur by chance.)

FOURTH COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE AND FOUR

April 1975 and April 1976

GRADE EQUIVALENT GAINS

	HSFT - HSNFT	HSFT - LI	FTCL - NLI
GRADE LEVEL	3 - 4	3 - 4	3 - 4
Subtests			
VOCABULARY	FT(S)	FT	FT
READING	FT	FT	FT
LANGUAGE	FT	FT	FT(S)
WORK-STUDY	--	--	--
MATHEMATICS	FT(S)	FT	FT
COMPOSITE	FT(S)	FT	FT(S)

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the greater gain.

E - Indicates the groups made equal gains.

N - Indicates the non-Follow Through group made the greater gain.

(S) - Indicates the difference in group gains was statistically significant. (Five chances or less in 100 that the difference in group gains could occur by chance.)

FIFTH COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADE THREE
April 1976

GRADE EQUIVALENT COMPARISONS

	HSFT - HSNFT	FTCL - NLI
Subtests		
VOCABULARY	N	N
READING	N	N
LANGUAGE	FT	N(s)
MATHEMATICS	FT	FT
COMPOSITE	N	N

KEY:

FT -	Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.
E -	Indicates the groups made equal grade equivalent scores.
N -	Indicates the non-Follow Through group made the higher grade equivalent score.
(s) -	Indicates the difference in group means was statistically significant. (Five chances or less in 100 that the difference in group means could occur by chance.)

SIXTH COHORT

SUMMARY RESULTS OF THE METROPOLITAN ACHIEVEMENT TEST

GRADE TWO
October, 1975

GRADE EQUIVALENT COMPARISONS

Subtests	HSFT - HSNFT	FTCL - NLI
WORD KNOWLEDGE	N	N
WORD ANALYSIS	N	N
READING	N(s)	N(s)
TOTAL READING	N(s)	N(s)
TOTAL MATHEMATICS	N(s)	N

KEY: FT - Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E - Indicates the groups made equal grade equivalent scores.

N - Indicates the non-Follow Through group made the higher grade equivalent score.

(s) - Indicates the difference in group means was statistically significant. (Five chances or less in 100 that the difference in group means could occur by chance.)

SEVENTH COHORT

SUMMARY RESULTS OF THE METROPOLITAN READINESS TEST

GRADE ONE
September, 1975

HSFT - HSNFT	FTCL - NLI
FT	N

KEY:

FT - Indicates the Follow Through group (HSFT or (FTCL) made the higher score.

E - Indicates the groups made equal scores.

N - Indicates the non-Follow Through group made the higher score.

(S) - Indicates the difference in group means was statistically significant. (Five chances or less in 100 that the difference in group means could occur by chance.)

PARENT PARTICIPATION TOTALS FOR ALL COHORTS

1975-76

	HSFT	FTCL
Attendance at PAC Meetings - 36 meetings	230	173
Attendance at Parent Activities - 49 meetings	267	304
Parent Visits to School		
Conference with teacher	205	292
Observer of classroom activities, drop in, etc.	281	469
Volunteer in classroom or other activities	148	272
Attend Open House	72	304
Teaching Staff Parent Contacts		
Home visit completed during school day	829	705
Home visit completed other than school day	43	60
Home visit attempted	139	48
School conference	299	498
Phone conference	84	65
Conference at another place	29	13

OVERVIEW

FOLLOW THROUGH PROGRAM EVALUATION
1975-76

INTRODUCTION

The Follow Through Project has been in operation in four Wichita elementary schools the past eight years (1968-69 through 1975-76). The philosophy, purpose, and evaluations have been documented in previous publications of the Research, Planning, and Development Services Division, Wichita Public Schools.

This report will be limited to: (1) a brief general description of the Follow Through Program; (2) a description of the groups which are compared for the purpose of evaluation; (3) statistical analyses of the recent standardized tests results for each cohort; and (4) parent participation data.

PROGRAM DESCRIPTION

Follow Through is a program developed by the United States Office of Education to sustain and supplement, in the early grades, the experiences gained by children from low-income families who have had a full year of Head Start or a comparable preschool program. Comprehensive services are provided in the areas of instruction, nutrition, health, social service, psychological service, parent involvement, and staff development.

Follow Through programs vary from community to community according to the various approaches or "models" selected. A nationally approved model (Lasser Gotkin) was selected for the first year. The model did not become available for general use that year. Wichita then developed and implemented its own model. The Tucson Early Education Model (TEEM) was selected during the second year and has been used each year since. This model was developed by the Arizona Center for Early Childhood Education, University of Arizona.

The first group (cohort) completed Follow Through at the end of the 1971-72 school year. Pupils who were in this First Cohort completed the seventh grade in May, 1976. The Eighth Cohort entered the program (kindergarten) in September, 1976.

The instructional objectives of the TEEM[1] include the development of the following:

1. An Intellectual Base

   The intellectual base is a collection of skills assumed to be necessary in the process of learning. These skills are as yet only partially recognized and defined and are usually not formally taught in the traditional educational program. The importance of these skills in the learning process is becoming increasingly recognized. Some of the intellectual base skills are complex behaviors which are difficult to define. They include the following abilities:

   Recollection of significant events
   Organization of one's behavior to specific goals
   Evaluation of alternatives
   Recognition of significant and important behaviors in others
   Imitation

2. Language Competence

   Language competence is one of the major technical skills of the culture to which a child must adapt. Information is transmitted principally in verbal form. This requires an acquaintance with a variety of linguistic labels, concepts, language forms, and an awareness of the function of language.

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[1] "The Tucson Early Education Model:" Arizona Center for Early Childhood Education, 1969.

3. A Motivational Base

The motivational base is a collection of attitudes and behavioral characteristics related to productive social involvement and learning. These include attitudes toward school and the learning process, and a willingness to change. In addition, there are the important attitudes toward self such as confidence, standards of work, and a consistent picture of one's self as one who can learn. It is assumed by the TEEM that these characteristics can be taught.

4. Societal Arts and Skills

These are defined as reading, writing, and the mathematical skills, as well as the social skills of cooperation and democratic procedures. These skills have been the traditional focus of early education programs. In the TEEM they constitute only one portion of the curriculum goals.

The TEEM emphasizes pupil individualization, pupil imitation of teacher-modeled behavior, and such teacher techniques as social reinforcement through praise, attention, and affection.

COMPARISON GROUPS

The design of the Follow Through evaluation includes five groups of pupils. The regular Follow Through group includes those children who participated in Head Start and Follow Through. Two groups were chosen to compare with the low-income Follow Through pupils: pupils who had Head Start but were not in Follow Through, and pupils who had no preschool experience and were from low-income families. A group of pupils from non-low-income families was chosen for comparison with the classmates of Follow Through pupils. A description of the five groups follows:

1. Head Start Follow Through (HSFT)

In Wichita, approximately one-half of the Head Start and comparable preschool program graduates are randomly selected to participate in the Follow Through Project. Those chosen are bused from low-income areas of the city to four elementary schools. Three of these schools are located in middle-class neighborhoods. The fourth school is located in a marginally middle-class neighborhood. HSFT is the group for whom Follow Through was designed.

2. Follow Through Classmates (FTCL)

This group consists of classmates of low-income Follow Through pupils. These pupils generally live in the neighborhood of the school they attend. They participate in the regular Follow Through Program.

3. Head Start Non Follow Through (HSNFT)

This group of children is also from low-income families. These pupils had a full year of Head Start or other comparable preschool program but were not selected to participate in the Follow Through Project.

4. Low Income (LI)

This group was selected from children who had not participated in a preschool program and were from low-income families. They were on the Head Start waiting list, but were not accepted presumably because their need was not as great as those selected. This factor would tend to make this group less comparable with the HSFT group than the HSNFT group.

5. Non Low Income (NLI)

This group is a random selection of pupils who attend four non-low-income schools. Each of the four NLI schools was chosen by pairing a school which had Follow Through classes with a non-low-income school without Follow Through. The bases for comparison were third grade Iowa Tests of Basic Skills results and socio-economic status of the school area as determined by a panel of county property assessors.

Most HSNFT and LI pupils are receiving or have received some form of compensatory education through Title I or other program. The comparisons then become not HSFT vs. pupils with no compensatory education, but HSFT vs. pupils in other compensatory programs.

Each group of Follow Through pupils in a particular grade is called a cohort. The cohorts and their actual grade placement during the school year 1975-76 are listed below:

First Cohort - 7th Grade (Completed Follow Through, May 1972)
Second Cohort - 6th Grade (Completed Follow Through, May 1973)
Third Cohort - 5th Grade (Completed Follow Through, May 1974)
Fourth Cohort - 4th Grade (Completed Follow Through, May 1975)
Fifth Cohort - 3rd Grade (Completed Follow Through, May 1976)
Sixth Cohort - 2nd Grade
Seventh Cohort - 1st Grade
Eighth Cohort - Kindergarten

PARENT PARTICIPATION

Parent participation is an important part of the Follow Through program. A summary of parent participation for all cohorts is included at the end of this report.

Teaching staff parent contacts, parent visits to school, attendance at Policy Advisory Committee (PAC) meetings, and attendance at parent activities are the four components of the parent participation program for which data are presented.

The evaluation was based on the standardized tests listed below which are part of the basic testing program of the Wichita Public Schools.

First Cohort

Third grade: Iowa Tests of Basic Skills, October 1971
Fourth grade: Iowa Tests of Basic Skills, October 1972
Fifth grade: Iowa Tests of Basic Skills, April 1974
Sixth grade: Iowa Tests of Basic Skills, April 1975
Seventh grade: No Testing

Second Cohort

Third grade: Iowa Tests of Basic Skills, October 1972
Fourth grade: Iowa Tests of Basic Skills, April 1974
Fifth grade: Iowa Tests of Basic Skills, April 1975
Sixth grade: Iowa Tests of Basic Skills, April 1976

Third Cohort

Third grade: Iowa Tests of Basic Skills, April 1974
Fourth grade: Iowa Tests of Basic Skills, April 1975
Fifth grade: Iowa Tests of Basic Skills, April 1976

Fourth Cohort

Third grade: Iowa Tests of Basic Skills, April 1975
Fourth grade: Iowa Tests of Basic Skills, April 1976

Fifth Cohort

Third grade: Iowa Tests of Basic Skills, April 1976

Sixth Cohort

Second grade: Metropolitan Achievement Tests, October 1975

Seventh Cohort

First grade: Metropolitan Readiness Test, September 1975

Eighth Cohort

Kindergarten: No Testing

DESCRIPTION OF STANDARDIZED TESTS

The IOWA TESTS OF BASIC SKILLS (ITBS) provide for comprehensive measurement in the fundamental skills of vocabulary, reading, the mechanics of writing, methods of study, and mathematics.

The METROPOLITAN ACHIEVEMENT TESTS (MAT) are a series of group administered measures designed to assess pupil achievement in important content and skill areas of the school curriculum.

The METROPOLITAN READINESS TEST (MRT) is a group test designed to measure the extent to which school beginners have developed the skills and abilities that contribute to readiness for reading.

NOTE: Hereafter, in the text of this report, all tests will be referred to by the abbreviations which are included above in parentheses following each test title.

GLOSSARY OF SYMBOLS AND ABBREVIATIONS USED IN TABLES AND GRAPHS OF STANDARDIZED TEST DATA

N	The number of pupils in the group
$\bar{x}$	The mean of the grade equivalents of the group
RS $\bar{x}$	The mean of the raw scores of the group
s	The standard deviation for the group of scores
t	A computed statistic which is used to determine if a significant difference exists between means of two groups
NSD	No significant difference (at .05 level)
$p \leq .05$	The difference in means of the two groups is statistically significant at the level indicated
G.E.	Grade equivalent
%ile	Percentile

FIRST COHORT

Head Start	1967-68
Kindergarten	1968-69
First Grade	1969-70
Second Grade	1970-71
Third Grade (completed Follow Through Program)	1971-72
Fourth Grade	1972-73
Fifth Grade	1973-74
Sixth Grade	1974-75
Seventh Grade	1975-76

The First Cohort did not take any additional tests this year, but to aid continuity, summary results are included in the tables and graphs on the following pages.

TABLE 1.1

FOUR-YEAR RESULTS FOR HSFT AND HSNFT ON THE IOWA TESTS OF BASIC SKILLS FIRST COHORT - GRADES THREE, FOUR, FIVE, AND SIX

	October 1971 Third Grade		October 1972 Fourth Grade		April 1974 Fifth Grade		April 1975 Sixth Grade	
VOCABULARY								
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	36	46	36	46	36	46	36	46
$\bar{x}$	21.92	26.28	29.86	34.74	43.64	44.85	49.69	52.91
s	8.02	9.09	8.06	10.11	12.04	11.92	15.50	16.20
t	2.2783 Sig. at .05		2.4003 Sig. at .02		0.4474 NSD		0.9032 NSD	
READING COMPREHENSION								
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	36	46	36	46	36	46	36	46
$\bar{x}$	25.22	27.86	31.86	35.83	46.69	47.26	52.83	54.93
s	7.64	9.52	9.81	9.52	12.59	11.51	15.50	16.04
t	1.3800 NSD		1.8165 NSD		0.2071 NSD		0.5963 NSD	
LANGUAGE SKILLS								
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	36	46	36	46	36	46	36	46
$\bar{x}$	24.22	29.85	31.36	35.06	44.86	46.93	51.94	55.54
s	7.74	12.02	8.65	8.22	10.22	11.43	14.02	14.21
t	2.5364 Sig. at .02		1.9412 NSD		0.8546 NSD		1.1321 NSD	

TABLE 1.1 (cont'd)

	October 1971 Third Grade		October 1972 Fourth Grade		April 1974 Fifth Grade		April 1975 Sixth Grade	
WORK-STUDY SKILLS								
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	(Not given in		36	46	36	46	36	46
$\overline{x}$	Third Grade)		35.36	35.91	46.61	47.93	52.92	56.72
s			7.35	6.73	9.46	10.52	11.81	11.15
t			0.3456 NSD		0.5908 NSD		1.4629 NSD	
MATHEMATICS SKILLS								
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	36	46	36	46	36	46	36	46
$\overline{x}$	24.67	28.41	32.81	35.67	47.11	51.48	54.75	55.07
s	5.52	6.95	6.57	7.42	9.85	9.94	13.27	15.09
t	2.6875 Sig. at .01		1.1055 NSD		1.9593 NSD		0.0992 NSD	
COMPOSITE								
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	36	46	36	46	36	46	36	46
$\overline{x}$	23.61	27.74	32.08	35.09	45.72	47.91	52.50	55.04
s	5.81	7.76	6.18	6.69	9.42	9.73	11.65	11.81
t	2.7211 Sig. at .01		2.0810 Sig. at .05		1.0176 NSD		0.9631 NSD	

TABLE 1.2

FOUR-YEAR RESULTS FOR HSFT AND LI ON THE IOWA TESTS OF BASIC SKILLS FIRST COHORT - GRADES THREE, FOUR, FIVE, AND SIX

	October 1971 Third Grade		October 1972 Fourth Grade		April 1974 Fifth Grade		April 1975 Sixth Grade	
VOCABULARY								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	36	39	36	39	36	39	36	39
$\bar{x}$	21.92	26.36	29.86	35.36	43.64	44.87	49.69	53.97
s	8.02	9.65	8.06	10.10	12.04	15.05	15.50	16.20
t	2.1450 Sig. at .05		2.5801 Sig. at .02		0.3878 NSD		1.1471 NSD	
READING COMPREHENSION								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	36	39	36	39	36	39	36	39
$\bar{x}$	25.22	28.08	31.86	37.36	46.69	49.36	52.83	56.38
s	7.64	8.33	9.81	10.96	12.59	13.16	15.74	16.04
t	1.5272 NSD		2.2615 Sig. at .05		0.8837 NSD		0.9544 NSD	
LANGUAGE SKILLS								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	36	39	36	39	36	39	36	39
$\bar{x}$	24.22	29.49	31.36	35.07	44.86	46.31	51.94	54.59
s	7.74	12.58	8.65	8.22	10.22	11.99	14.02	13.72
t	2.1728 Sig. at .05		1.4741 NSD		0.5560 NSD		0.8134 NSD	

TABLE 1.2 (cont'd)

	October 1971 Third Grade		October 1972 Fourth Grade		April 1974 Fifth Grade		April 1975 Sixth Grade	
WORK-STUDY SKILLS								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	(Not given in		36	39	36	39	36	39
$\bar{x}$	Third Grade)		35.36	36.21	46.61	48.08	52.92	55.90
s			7.35	8.65	9.46	10.75	11.81	12.23
t			0.4503 NSD		0.6194 NSD		1.0592 NSD	
MATHEMATICS SKILLS								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	36	39	36	39	36	39	36	39
$\bar{x}$	24.67	27.82	33.81	35.56	47.11	49.36	54.75	57.05
s	5.52	5.85	6.57	8.18	9.85	12.03	13.27	15.09
t	2.3692 Sig. at .02		1.0162 NSD		0.8760 NSD		0.7858 NSD	
COMPOSITE								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	36	39	36	39	36	39	36	39
$\bar{x}$	23.61	27.67	32.08	35.33	45.72	47.33	52.50	55.62
s	5.81	7.64	6.17	7.53	9.42	11.47	11.65	12.45
t	2.5657 Sig. at .02		2.0226 Sig. at .05		0.6582 NSD		1.1045 NSD	

TABLE 1.3

FOUR-YEAR RESULTS FOR FTCL AND NLI ON THE IOWA TESTS OF BASIC SKILLS
FIRST COHORT - GRADES THREE, FOUR, FIVE, AND SIX

VOCABULARY

	October 1971 Third Grade		October 1972 Fourth Grade		April 1974 Fifth Grade		April 1975 Sixth Grade	
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	37	55	37	55	37	55	37	55
$\overline{x}$	31,24	39.27	40.68	49.05	57.68	63.36	67.97	74.00
s	10.84	13.61	15.24	14.77	15.04	13.45	17.50	15.41
t	3.1069 Sig. at .01		2.5869 Sig. at .02		1.8325 NSD		1.6781 NSD	

READING COMPREHENSION

	October 1971 Third Grade		October 1972 Fourth Grade		April 1974 Fifth Grade		April 1975 Sixth Grade	
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	37	55	37	55	37	55	37	55
$\overline{x}$	33.70	41.22	44.78	49.56	57.41	65.55	68.27	73.95
s	12.99	11.86	14.35	13.09	16.16	13.70	15.97	15.00
t	2.7838 Sig. at .01		1.6026 NSD		2.4845 Sig. at .02		1.6922 NSD	

LANGUAGE SKILLS

	October 1971 Third Grade		October 1972 Fourth Grade		April 1974 Fifth Grade		April 1975 Sixth Grade	
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	37	55	37	55	37	55	37	55
$\overline{x}$	32.19	39.25	41.81	46.15	56.11	61.47	65.92	72.51
s	13.32	12.89	12.65	11.57	13.98	13.04	14.95	15.86
t	2.4979 Sig. at .02		1.6471 NSD		1.8315 NSD		1.9994 Sig. at .05	

TABLE 1.3 (cont'd)

	October 1971 Third Grade		October 1972 Fourth Grade		April 1974 Fifth Grade		April 1975 Sixth Grade	
WORK-STUDY SKILLS								
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	(Not given in		37	55	37	55	37	55
$\bar{x}$	Third Grade)		41.66	46.86	58.70	63.84	67.70	73.45
s			10.41	10.75	13.45	12.43	13.83	13.27
t			2.2888 Sig. at .05		1.8281 NSD		1.9642 NSD	
MATHEMATICS SKILLS								
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	37	55	37	55	37	55	37	55
$\bar{x}$	30.38	35.33	40.65	44.00	57.46	61.07	66.59	70.00
s	8.79	8.10	7.65	9.40	13.41	11.71	13.71	14.18
t	2.6998 Sig. at .01		1.8554 NSD		1.3161 NSD		1.1387 NSD	
COMPOSITE								
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	37	55	37	55	37	55	37	55
$\bar{x}$	31.46	38.24	41.70	46.69	57.30	62.80	67.24	72.78
s	10.51	9.51	10.75	10.90	13.22	11.47	13.83	12.71
t	3.1122 Sig. at .01		2.1448 Sig. at .05		2.0377 Sig. at .05		1.9219 NSD	

FIGURE 1.1

GRADE EQUIVALENT GAINS FOR
ITBS, OCTOBER 1971 - APRIL 1975
THIRD GRADE - SIXTH GRADE
(National Norm 3.6)

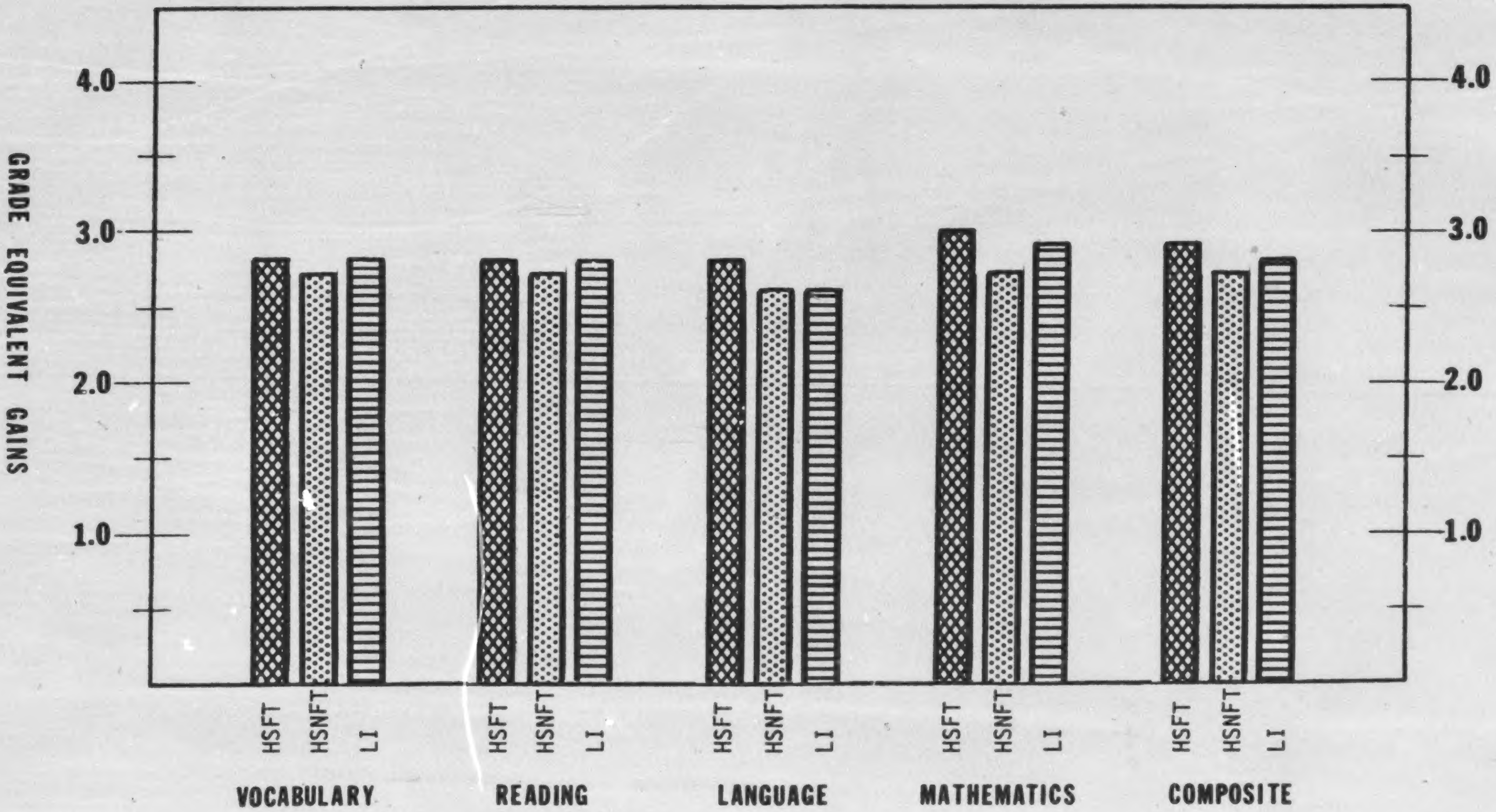
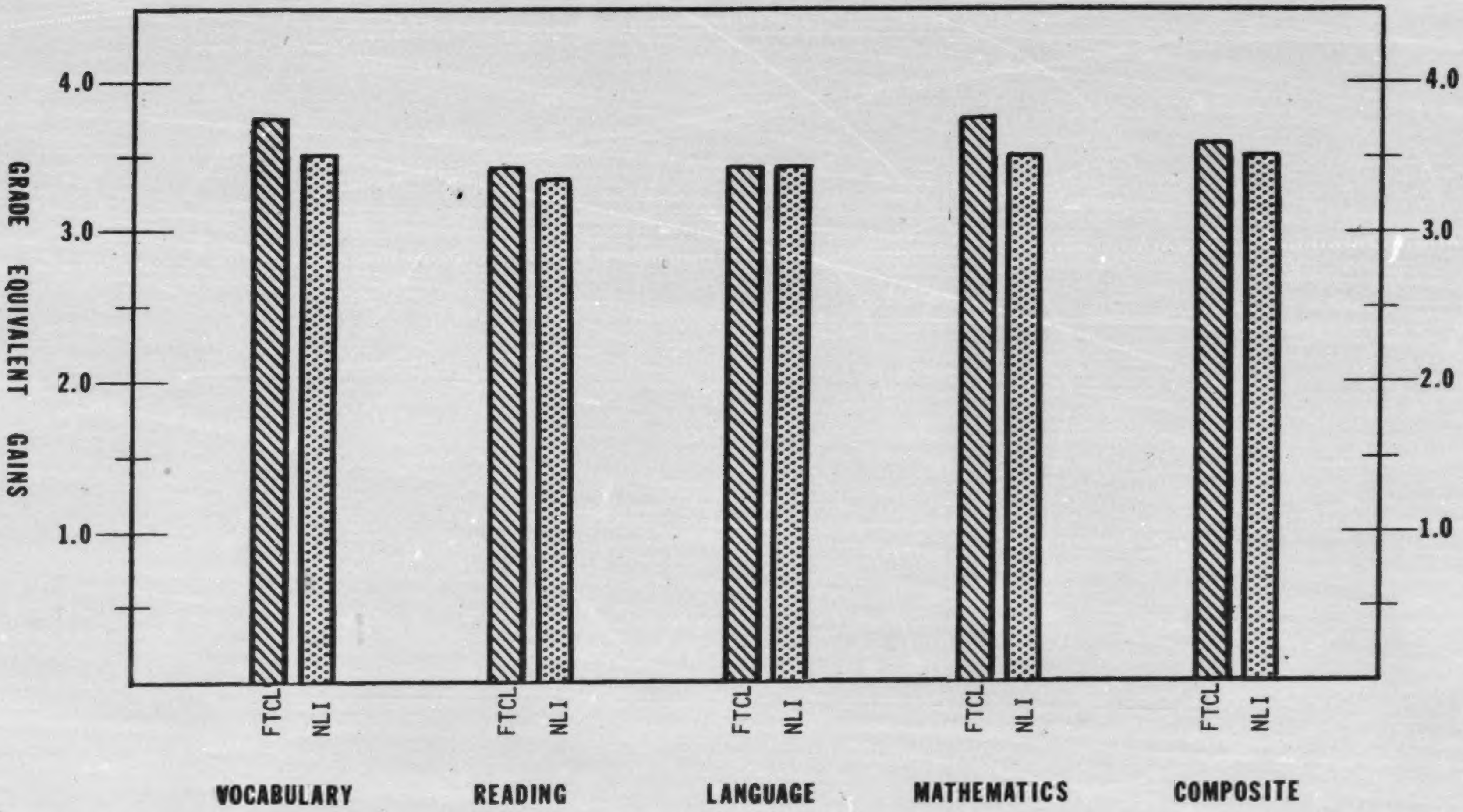


FIGURE 1.2

GRADE EQUIVALENT GAINS FOR **FTCL & NLI - 1st COHORT**
ITBS, OCTOBER 1971 - APRIL 1975
THIRD GRADE - SIXTH GRADE
(National Norm 3.6)



FIRST COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, FIVE, AND SIX

October 1971, October 1972, April 1974, and April 1975

GRADE EQUIVALENT COMPARISONS

	HSFT - HSNFT				HSFT - LI				FTCL - NLI			
GRADE LEVEL	3	4	5	6	3	4	5	6	3	4	5	6
Subtests												
VOCABULARY	N$^{(s)}$	N$^{(s)}$	N	N	N$^{(s)}$	N$^{(s)}$	N	N	N$^{(s)}$	N$^{(s)}$	N	N
READING	N	N	E	N	N	N$^{(s)}$	N	N	N$^{(s)}$	N	N$^{(s)}$	N
LANGUAGE	N$^{(s)}$	N	N	N	N$^{(s)}$	N	N	N	N$^{(s)}$	N	N	N$^{(s)}$
WORK-STUDY		N	N	N		N	N	N		N$^{(s)}$	N	N
MATHEMATICS	N$^{(s)}$	N	N	E	N$^{(s)}$	N	N	N	N$^{(s)}$	N	N	N
COMPOSITE	N$^{(s)}$	N$^{(s)}$	N	N	N$^{(s)}$	N$^{(s)}$	N	N	N$^{(s)}$	N$^{(s)}$	N$^{(s)}$	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E - Indicates the groups made equal grade equivalent scores.

N - Indicates the non-Follow Through group made the higher grade equivalent score.

(s) - Indicates the difference in group means was statistically significant. ($p \leq .05$)

FIRST COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, FIVE, AND SIX

October 1971, October 1972, April 1974, and April 1975

GRADE EQUIVALENT GAINS

	HSFT - HSNFT				HSFT - LI				FTCL - NLI			
GRADE LEVEL	3-4	4-5	5-6	Total	3-4	4-5	5-6	Total	3-4	4-5	5-6	Total
Subtests												
VOCABULARY	N	FT	N	FT	N	FT	N	E	E	FT	N	FT
READING	N	FT	N	FT	N	FT	N	E	FT	N	FT	FT
LANGUAGE	FT	FT	N	FT	FT	FT	N	FT	FT	N	N	E
WORK-STUDY		E	N			E	N			E	E	
MATHEMATICS	E	N	FT	FT	E	FT	E	FT	FT	N	FT	FT
COMPOSITE	FT	FT	E	FT	FT	FT	N	FT	FT	N	E	FT

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the greater gain.

E - Indicates the groups made equal gains.

N - Indicates the non-Follow Through group made the greater gain.

(S) - Indicates the difference in group gains was statistically significant. ($p \leq .05$)

The First Cohort Follow Through groups had higher total grade equivalent gains than their comparison groups on nine of the 12 subtests (four subtests, Vocabulary, Reading, Language, and Mathematics for each comparison). The HSFT - HSNFT comparison showed the greatest gains of the three (HSFT-HSNFT, HSFT-LI, and FTCL-NLI). The low income Follow Through group, HSFT, gained more in the three-year period than the HSNFT group on all four subtests. None of the gains were statistically significant ($p \leq .05$). While they gained more, the two Follow Through groups still had not achieved higher grade equivalents on the sixth grade test. One subtest, Mathematics, the HSFT group and the HSNFT group had equal grade equivalents. On all others the Follow Through groups had lower grade equivalents than their comparison groups.

Some studies have shown that Follow Through children as a group have better attendance than comparable groups of non-Follow Through children. Mean attendance computations for this cohort indicate little difference in the attendance of Follow Through children and the non-Follow Through comparison groups. The mean attendance for each group is given below:

N=41 HSFT $\bar{x}$ attendance = 158.69 days present
N=54 HSNFT $\bar{x}$ attendance = 158.33 days present
N=48 LI $\bar{x}$ attendance = 155.59 days present

N=22 FTCL $\bar{x}$ attendance = 162.18 days present
N=50 NLI $\bar{x}$ attendance - 168.58 days present

(180 days possible)

SECOND COHORT

Head Start	1968-69
Kindergarten	1969-70
First Grade	1970-71
Second Grade	1971-72
Third Grade (completed Follow Through Program)	1972-73
Fourth Grade	1973-74
Fifth Grade	1974-75
Sixth Grade	1975-76

The Second Cohort took the ITBS in October 1972, April 1974, April 1975, and April 1976. The results of these tests were anlayzed for group mean differences for HSFT-HSNFT; HSFT-LI; and FTCL-NLI. Grade equivalent gains were also analyzed for each group.

Tables 2.1, 2.2, and 2.3 give the mean on each subtest for HSFT compared with HSNFT: HSFT compared with LI: and FTCL compared with NLI. Standard deviations are given for each group. The "t" statistic is given for each of the comparisons, with the indication of statistically significant differences between the means.

Tables 2.4 through 2.8 show the grade equivalent and percentile for each subtest of the ITBS, as well as the grade equivalent gain from October 1972 to April 1976 for each subtest.

Figures 2.1 and 2.2 graphically compare the grade equivalent gains for the groups.

Figures 2.3 through 2.14 chart the progress of each group on each subtest from the October 1972 testing to the April 1976 testing.

TABLE 2.1

FOUR-YEAR RESULTS FOR HSFT AND HSNFT ON THE
IOWA TESTS OF BASIC SKILLS
SECOND COHORT - GRADES THREE, FOUR, FIVE, AND SIX

VOCABULARY

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	45	31	45	31	45	31	45	31
$\overline{x}$	26.47	25.29	40.80	37.00	47.24	45.03	55.53	53.10
s	8.25	8.79	11.39	10.14	12.67	10.59	15.97	14.47
t	0.5792 NSD		1.5054 NSD		0.8139 NSD		0.6815 NSD	

READING COMPREHENSION

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	45	31	45	31	45	31	45	31
$\overline{x}$	25.33	27.52	39.49	40.94	49.20	47.61	56.80	55.90
s	8.83	8.09	11.61	10.06	11.77	10.68	12.81	12.80
t	1.0980 NSD		0.5702 NSD		0.6020 NSD		0.2958 NSD	

LANGUAGE SKILLS

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	45	31	45	31	45	31	45	31
$\overline{x}$	29.96	30.58	43.40	39.26	49.22	48.29	61.53	54.23
s	12.13	12.37	10.55	9.88	11.69	10.93	14.03	13.43
t	0.2151 NSD		1.7217 NSD		0.3500 NSD		2.2562 Sig. at .05	

TABLE 2.1 (cont'd)

WORK-STUDY SKILLS

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	(Not given in		45	31	45	31	45	31
$\overline{x}$	Third Grade)		40.29	39.84	49.67	45.81	60.42	53.81
s			9.73	8.52	12.16	8.78	12.76	10.72
t			0.2105 NSD		1.5852 NSD		2.4110 Sig. at .02	

MATHEMATICS SKILLS

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	45	31	45	31	45	31	45	31
$\overline{x}$	26.33	27.61	41.51	40.45	49.78	46.61	59.22	55.65
s	6.54	6.11	9.37	7.35	9.86	8.72	10.76	10.39
t	0.8593 NSD		0.5438 NSD		1.4534 NSD		1.4332 NSD	

COMPOSITE

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	45	31	45	31	45	31	45	31
$\overline{x}$	26.64	27.35	41.02	39.42	49.02	46.68	58.80	54.68
s	7.36	6.89	8.97	8.26	10.06	7.87	10.63	10.28
t	0.4235 NSD		0.7914 NSD		1.1226 NSD		1.6703 NSD	

TABLE 2.2

FOUR-YEAR RESULTS FOR HSFT AND LI ON THE IOWA TESTS OF BASIC SKILLS SECOND COHORT - GRADES THREE, FOUR, FIVE, AND SIX

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
VOCABULARY								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	45	35	45	35	45	35	45	35
$\bar{x}$	26.47	24.54	40.80	37.23	47.24	43.89	55.53	53.86
s	8.25	10.94	11.39	10.52	12.67	14.91	15.97	14.00
t	0.8543 NSD		1.4345 NSD		1.0524 NSD		0.4930 NSD	
READING COMPREHENSION								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	45	35	45	35	45	35	45	35
$\bar{x}$	25.33	27.91	39.49	39.31	49.20	50.66	56.80	56.54
s	8.83	10.70	11.61	11.84	11.77	10.35	12.81	12.01
t	1.1386 NSD		0.0651 NSD		0.5805 NSD		0.0911 NSD	
LANGUAGE SKILLS								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	45	35	45	35	45	35	45	35
$\bar{x}$	29.96	30.31	43.40	40.14	49.22	48.20	61.53	58.40
s	12.13	12.19	10.55	11.20	11.69	12.60	14.00	15.18
t	0.1292 NSD		1.3057 NSD		0.3666 NSD		0.9342 NSD	

TABLE 2.2 (cont'd)

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
WORK-STUDY SKILLS								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	(Not given in		45	35	45	35	45	35
$\bar{x}$	Third Grade)		40.29	39.97	49.67	47.74	60.42	60.43
s			9.73	8.50	12.16	10.32	12.76	11.75
t			0.1535 NSD		0.7552 NSD		0.0023 NSD	
MATHEMATICS SKILLS								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	45	35	45	35	45	35	45	35
$\bar{x}$	26.33	26.80	41.51	39.83	49.78	47.91	59.22	58.60
s	6.54	7.07	9.37	10.06	9.86	10.91	10.76	13.36
t	0.2986 NSD		0.7547 NSD		0.7798 NSD		0.2216 NSD	
COMPOSITE								
	HSFT	LI	HSFT	LI	HSFT	LI	HSFT	LI
N	45	35	45	35	45	35	45	35
$\bar{x}$	26.64	27.00	41.02	39.29	49.02	47.74	58.80	57.60
s	7.36	9.33	8.97	9.32	10.06	10.50	10.63	11.88
t	0.1826 NSD		0.8291 NSD		0.5435 NSD		0.4629 NSD	

TABLE 2.3

FOUR-YEAR RESULTS FOR FTCL AND NLI ON THE IOWA TESTS OF BASIC SKILLS SECOND COHORT - GRADES THREE, FOUR, FIVE, AND SIX

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
VOCABULARY								
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	26	23	26	23	26	23	26	23
$\overline{x}$	33.65	37.57	49.58	58.83	60.35	64.00	67.50	74.00
s	10.75	11.63	11.48	13.45	13.58	13.64	15.43	16.10
t	1.1920 NSD		1.1568 NSD		0.9181 NSD		1.4082 NSD	
READING COMPREHENSION								
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	26	23	26	23	26	23	26	23
$\overline{x}$	33.92	38.70	50.92	55.17	59.08	64.26	64.65	72.96
s	13.61	11.98	14.63	13.19	14.20	16.50	15.32	16.44
t	1.2786 NSD		1.0472 NSD		1.1463 NSD		1.7831 NSD	
LANGUAGE SKILLS								
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	26	23	26	23	26	23	26	23
$\overline{x}$	36.65	36.09	54.54	53.83	61.23	62.17	73.88	71.87
s	12.85	14.66	13.60	13.04	13.35	14.78	13.92	16.39
t	0.1401 NSD		0.1831 NSD		0.2283 NSD		0.4509 NSD	

TABLE 2.3 (cont'd)

WORK-STUDY SKILLS

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	(Not given in		26	23	26	23	26	23
$\bar{x}$	Third Grade)		49.38	53.17	59.00	65.91	69.54	73.57
s			10.74	12.60	11.38	13.04	13.15	15.90
t			1.1020 NSD		1.9239 NSD		0.9385 NSD	

MATHEMATICS SKILLS

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	26	23	26	23	26	23	26	23
$\bar{x}$	31.15	36.26	49.46	52.13	59.38	62.17	68.27	73.48
s	7.74	8.90	9.39	11.44	10.23	12.15	12.41	12.53
t	2.0848 Sig. at .05		0.8671 NSD		0.8449 NSD		1.4286 NSD	

COMPOSITE

	October 1972 Third Grade		April 1974 Fourth Grade		April 1975 Fifth Grade		April 1976 Sixth Grade	
	FTCL	NLI	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	26	23	26	23	26	23	26	23
$\bar{x}$	33.46	36.61	50.77	53.65	59.85	63.61	69.92	73.26
s	10.02	10.77	11.05	11.87	11.39	13.13	12.76	14.32
t	1.0324 NSD		0.8579 NSD		1.0422 NSD		0.8386 NSD	

TABLE 2.4

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **HSFT » 2nd COHORT**

GRADES THREE, FOUR, FIVE, AND SIX
N = 45

	FORM 5, LEVEL 9 October, 1972: Grade **3**		FORM 5, LEVEL 10 April, 1974: Grade **4**			FORM 5, LEVEL 11 April, 1975: Grade **5**			FORM 5, LEVEL 12 April, 1976: Grade **6**			
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.6)	G.E.	%ile	G.E. Gain (Norm) (1.0)	G.E.	%ile	G.E. Gain (Norm) (1.0)	Total G.E. Gain (Norm) (3.6)
VOCABULARY	2.6	34	4.1	34	1.5	4.7	28	0.6	5.6	27	0.9	3.0
READING COMPREHENSION	2.5	31	3.9	29	1.4	4.9	30	1.0	5.7	28	0.8	3.2
LANGUAGE SKILLS	3.0	48	4.3	41	1.3	4.9	34	0.6	6.2	42	1.3	3.2
WORK-STUDY SKILLS	---	--	4.0	28	---	5.0	32	1.0	6.0	37	1.0	---
MATHEMATICS	2.6	32	4.2	34	1.6	5.0	31	0.8	5.9	31	0.9	3.3
COMPOSITE	2.7	36	4.1	34	1.4	4.9	30	0.8	5.9	33	1.0	3.2

TABLE 2.5

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS, AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **HSNFT » 2nd COHORT**

GRADES THREE, FOUR, FIVE, AND SIX

N = 31

	FORM 5, LEVEL 9 October, 1972: Grade **3**		FORM 5, LEVEL 10 April, 1974: Grade **4**			FORM 5, LEVEL 11 April, 1975: Grade **5**			FORM 5, LEVEL 12 April, 1976: Grade **6**			
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.6)	G.E.	%ile	G.E. Gain (Norm) (1.0)	G.E.	%ile	G.E. Gain (Norm) (1.0)	Total G.E. Gain (Norm) (3.6)
VOCABULARY	2.5	31	3.7	26	0.8	4.5	24	0.8	5.3	23	0.8	2.8
READING COMPREHENSION	2.8	41	4.1	34	1.3	4.8	28	0.7	5.6	26	0.8	2.8
LANGUAGE SKILLS	3.1	52	3.9	30	0.8	4.8	31	0.9	5.4	27	0.6	2.3
WORK-STUDY SKILLS	---	--	4.0	28	---	4.6	20	0.6	5.4	22	0.8	---
MATHEMATICS SKILLS	2.8	40	4.0	28	1.2	4.7	22	0.7	5.6	24	0.9	2.8
COMPOSITE	2.7	36	3.9	28	1.2	4.7	25	0.8	5.5	24	0.8	2.8

TABLE 2.6

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **LI » 2nd COHORT**

GRADES THREE, FOUR, FIVE, AND SIX

N = 35

	FORM 5, LEVEL 9 October, 1972: Grade **3**		FORM 5, LEVEL 10 April, 1974: Grade **4**			FORM 5, LEVEL 11 April, 1975: Grade **5**			FORM 5, LEVEL 12 April, 1976: Grade **6**			
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.6)	G.E.	%ile	G.E. Gain (Norm) (1.0)	G.E.	%ile	G.E. Gain (Norm) (1.0)	Total G.E. Gain (Norm) (3.6)
VOCABULARY	2.5	31	3.7	26	1.2	4.4	23	0.7	5.4	24	1.0	2.9
READING COMPREHENSION	2.8	41	3.9	29	1.1	5.1	35	1.2	5.7	28	0.6	2.9
LANGUAGE SKILLS	3.0	48	4.0	33	1.0	4.8	31	0.8	5.8	34	1.0	2.8
WORK-STUDY SKILLS	---	--	4.0	28	---	4.8	26	0.8	6.0	37	1.2	---
MATHEMATICS SKILLS	2.7	36	4.0	31	1.3	4.8	25	0.8	5.9	31	1.1	3.2
COMPOSITE	2.7	36	3.9	28	1.2	4.8	27	0.9	5.8	31	0.9	3.1

TABLE 2.7

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **FTCL » 2nd COHORT**

GRADES THREE, FOUR, FIVE, AND SIX
N = 26

	FORM 5, LEVEL 9 October, 1972: Grade **3**		FORM 5, LEVEL 10 April, 1974: Grade **4**			FORM 5, LEVEL 11 April, 1975: Grade **5**			FORM 5, LEVEL 12 April, 1976: Grade **6**			
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.6)	G.E.	%ile	G.E. Gain (Norm) (1.0)	G.E.	%ile	G.E. Gain (Norm) (1.0)	Total G.E. Gain (Norm) (3.6)
VOCABULARY	3.4	60	5.0	58	1.6	6.0	57	1.0	6.8	52	0.8	3.4
READING COMPREHENSION	3.4	59	5.1	60	1.7	5.9	55	0.8	6.5	45	0.6	3.1
LANGUAGE SKILLS	3.7	69	5.5	68	1.8	6.1	59	0.6	7.4	64	1.3	3.7
WORK-STUDY SKILLS	---	--	4.9	60	---	5.9	59	1.0	7.0	59	1.2	---
MATHEMATICS SKILLS	3.1	52	4.9	59	1.8	5.9	58	1.0	6.8	54	0.9	3.7
COMPOSITE	3.3	60	5.1	63	1.8	6.0	59	0.9	7.0	59	1.0	3.7

TABLE 2.8

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **NLI » 2nd COHORT**

GRADES THREE, FOUR, FIVE, AND SIX

N = 23

	FORM 5, LEVEL 9 October, 1972: Grade **3**		FORM 5, LEVEL 10 April, 1974: Grade **4**			FORM 5, LEVEL 11 April, 1975: Grade **5**			FORM 5, LEVEL 12 April, 1976: Grade **6**			
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.6)	G.E.	%ile	G.E. Gain (Norm) (1.0)	G.E.	%ile	G.E. Gain (Norm) (1.0)	Total G.E. Gain (Norm) (3.6)
VOCABULARY	3.8	74	5.9	81	2.1	6.4	67	0.5	7.4	66	1.0	3.6
READING COMPREHENSION	3.9	77	5.5	70	1.6	6.4	67	0.9	7.3	63	0.9	3.4
LANGUAGE SKILLS	3.6	67	5.4	66	1.8	6.2	61	0.8	7.2	60	1.0	3.6
WORK-STUDY SKILLS	---	--	5.3	71	---	6.6	75	1.3	7.4	68	0.8	---
MATHEMATICS SKILLS	3.6	71	5.2	68	1.6	6.2	66	1.0	7.3	66	1.1	3.7
COMPOSITE	3.7	72	5.4	71	1.7	6.4	70	1.0	7.3	66	0.9	3.6

FIGURE 2.1

GRADE EQUIVALENT GAINS FOR **HSFT, HSNFT & LI ◇ 2nd COHORT**
ITBS, OCTOBER 1972 - APRIL 1976
THIRD GRADE - SIXTH GRADE
(National Norm 3.6)

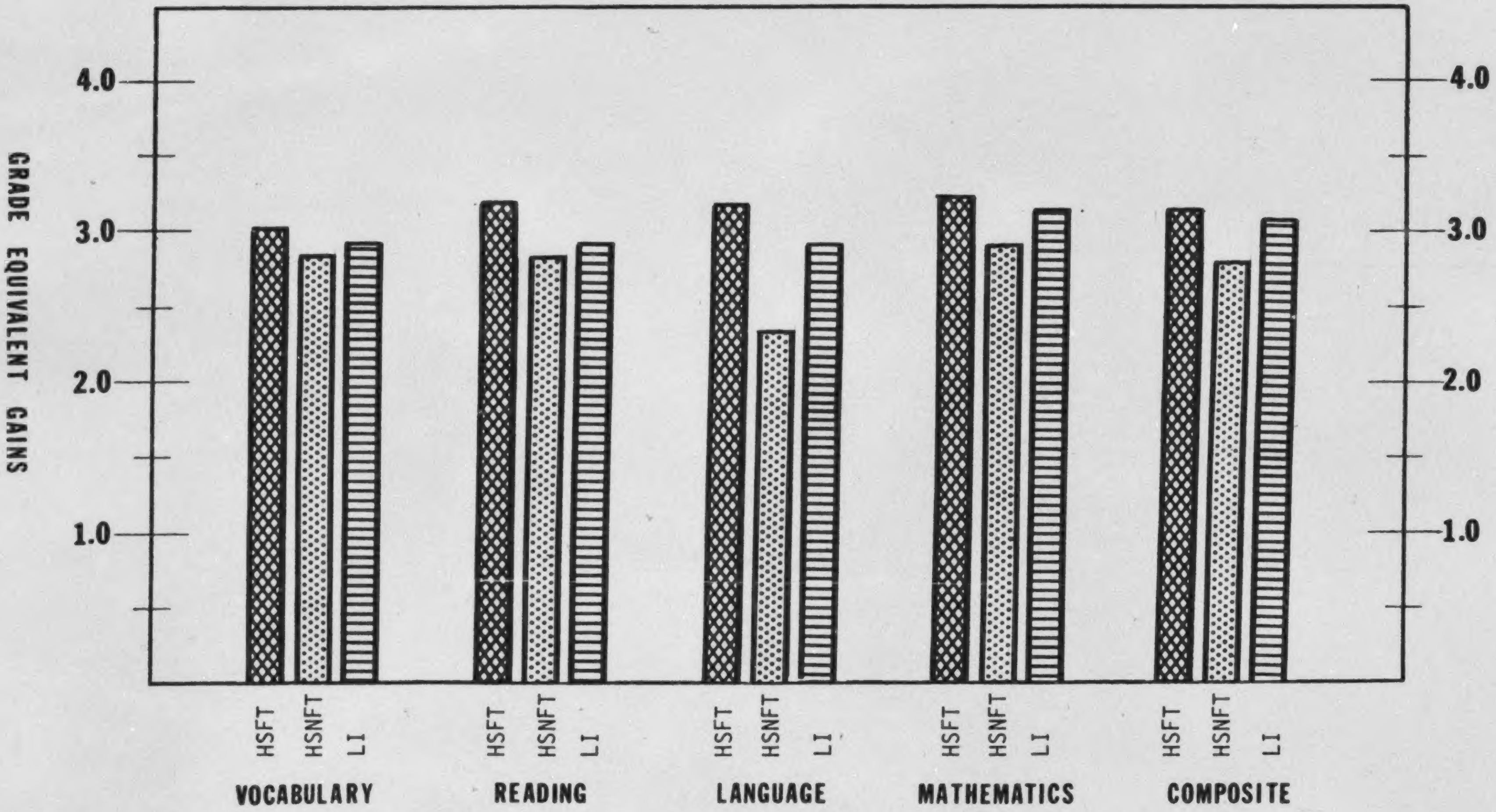


FIGURE 2.2

GRADE EQUIVALENT GAINS FOR **FTCL & NLI ⋄ 2nd COHORT**
ITBS, OCTOBER 1972 - APRIL 1976
THIRD GRADE - SIXTH GRADE
(National Norm 3.6)

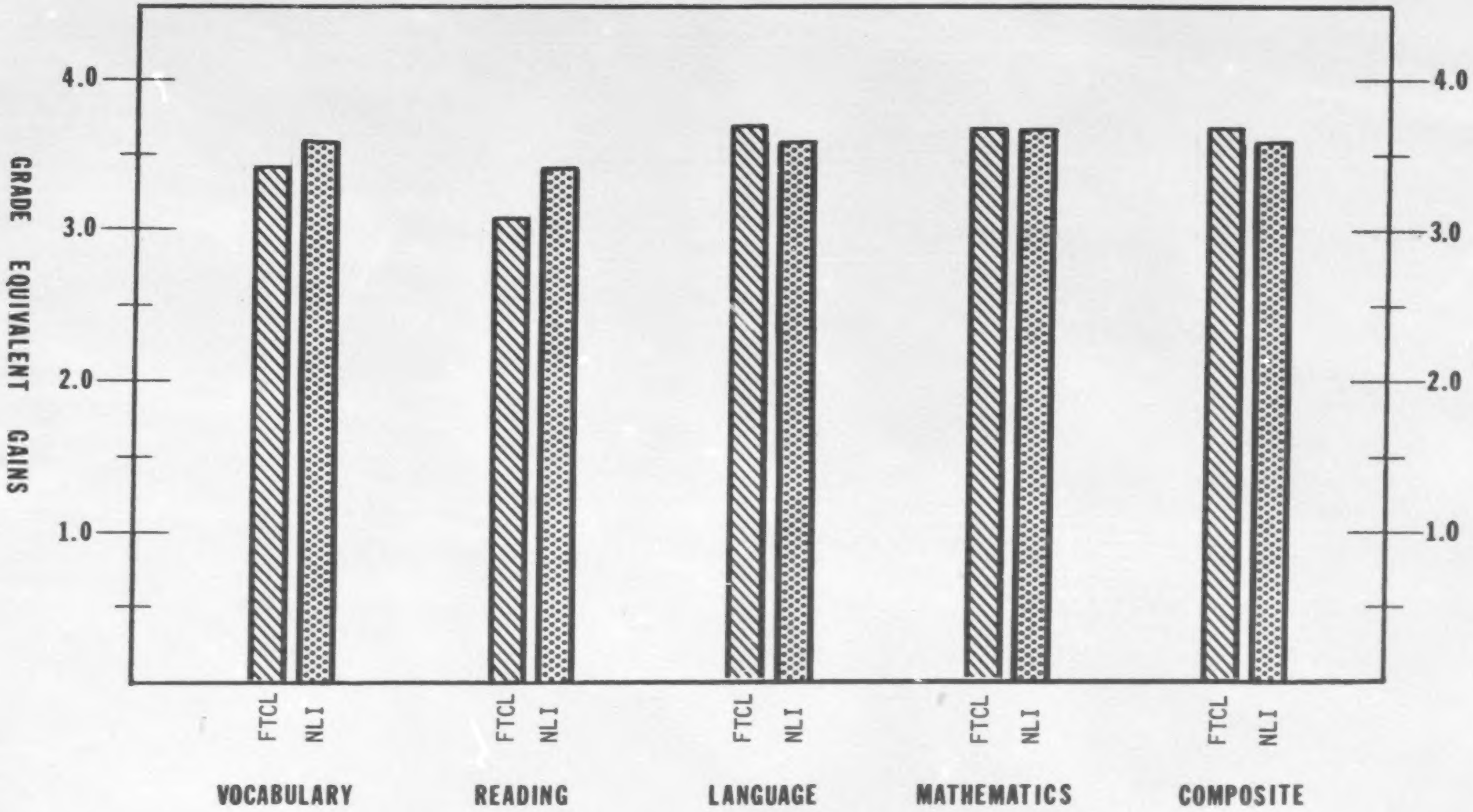


FIGURE 2.3

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **VOCABULARY** SUBTEST

GRADES THREE, FOUR, FIVE AND SIX

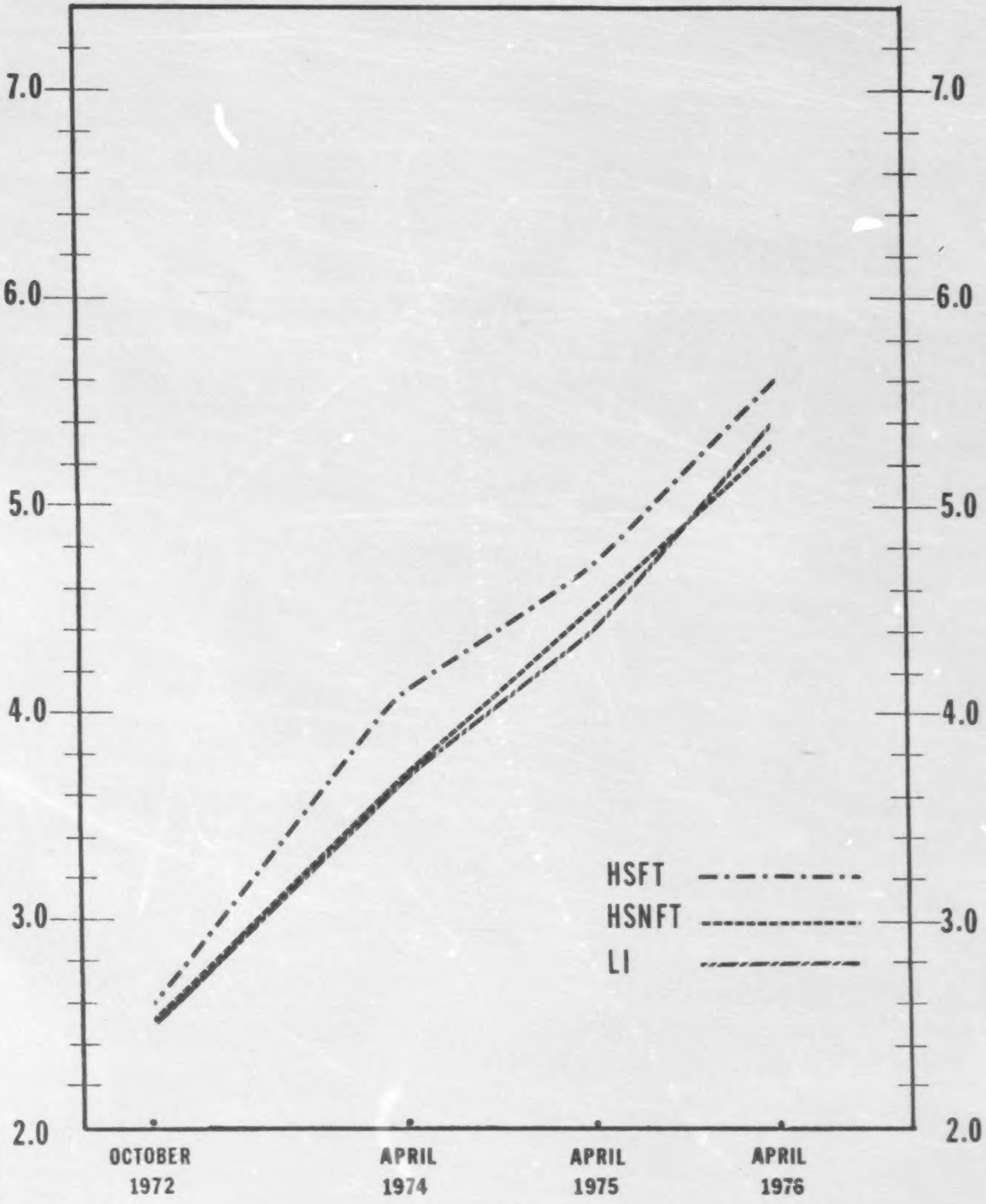


FIGURE 2.4

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **READING** SUBTEST

GRADES THREE, FOUR, FIVE, AND SIX

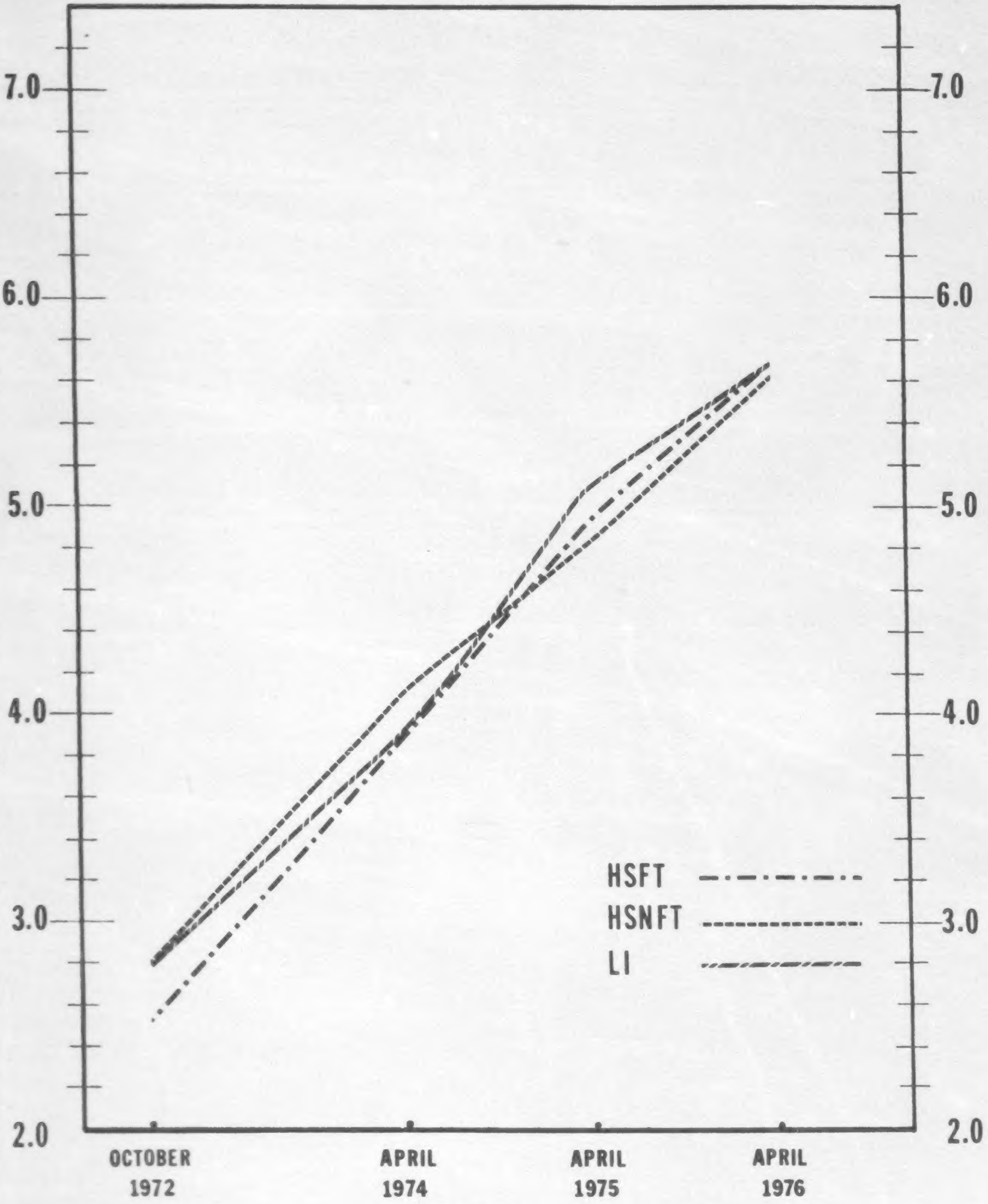


FIGURE 2.5

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **LANGUAGE** SUBTEST

GRADES THREE, FOUR, FIVE, AND SIX

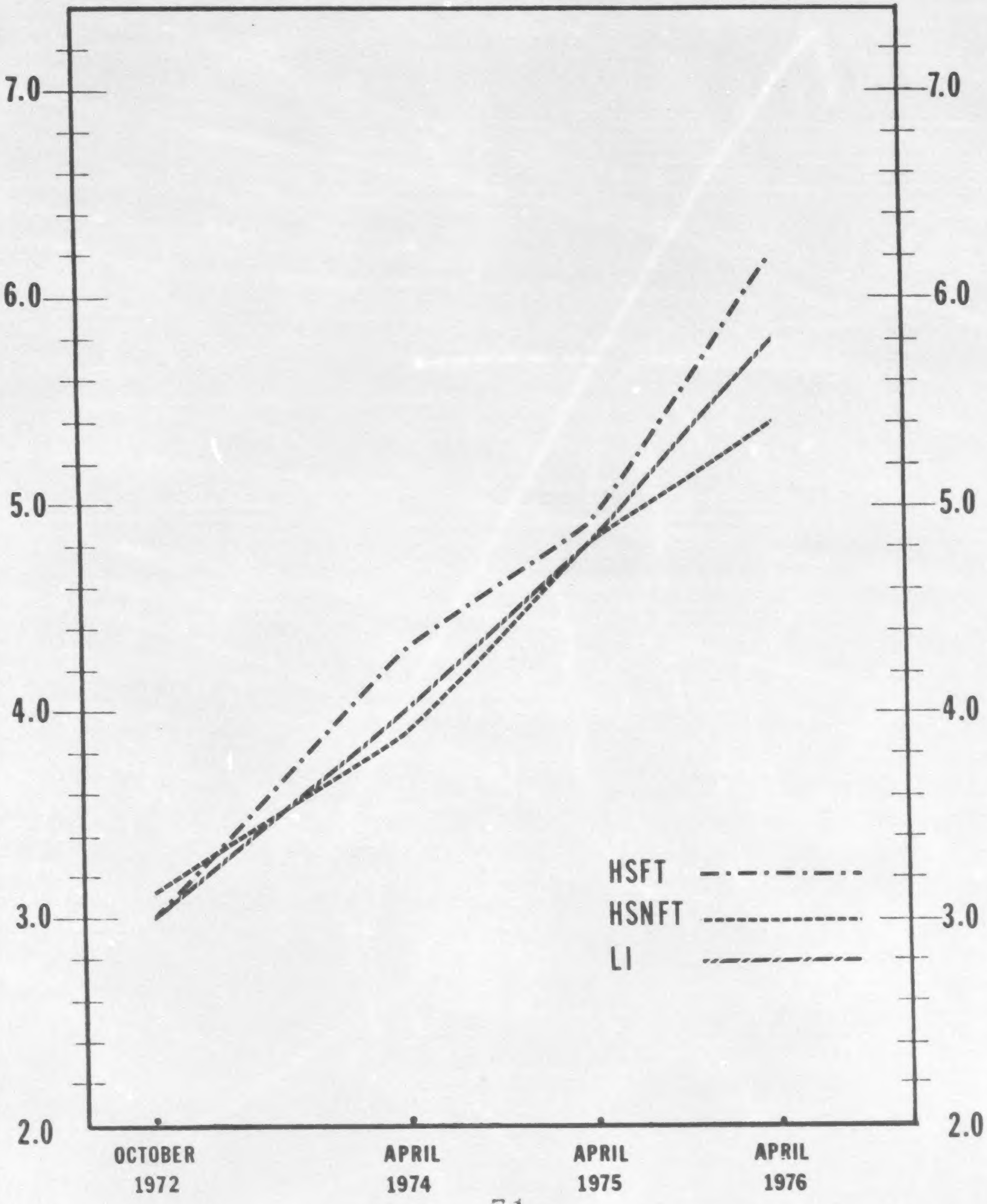


FIGURE 2.6

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **WORK-STUDY SKILLS** SUBTEST

GRADES FOUR, FIVE, AND SIX

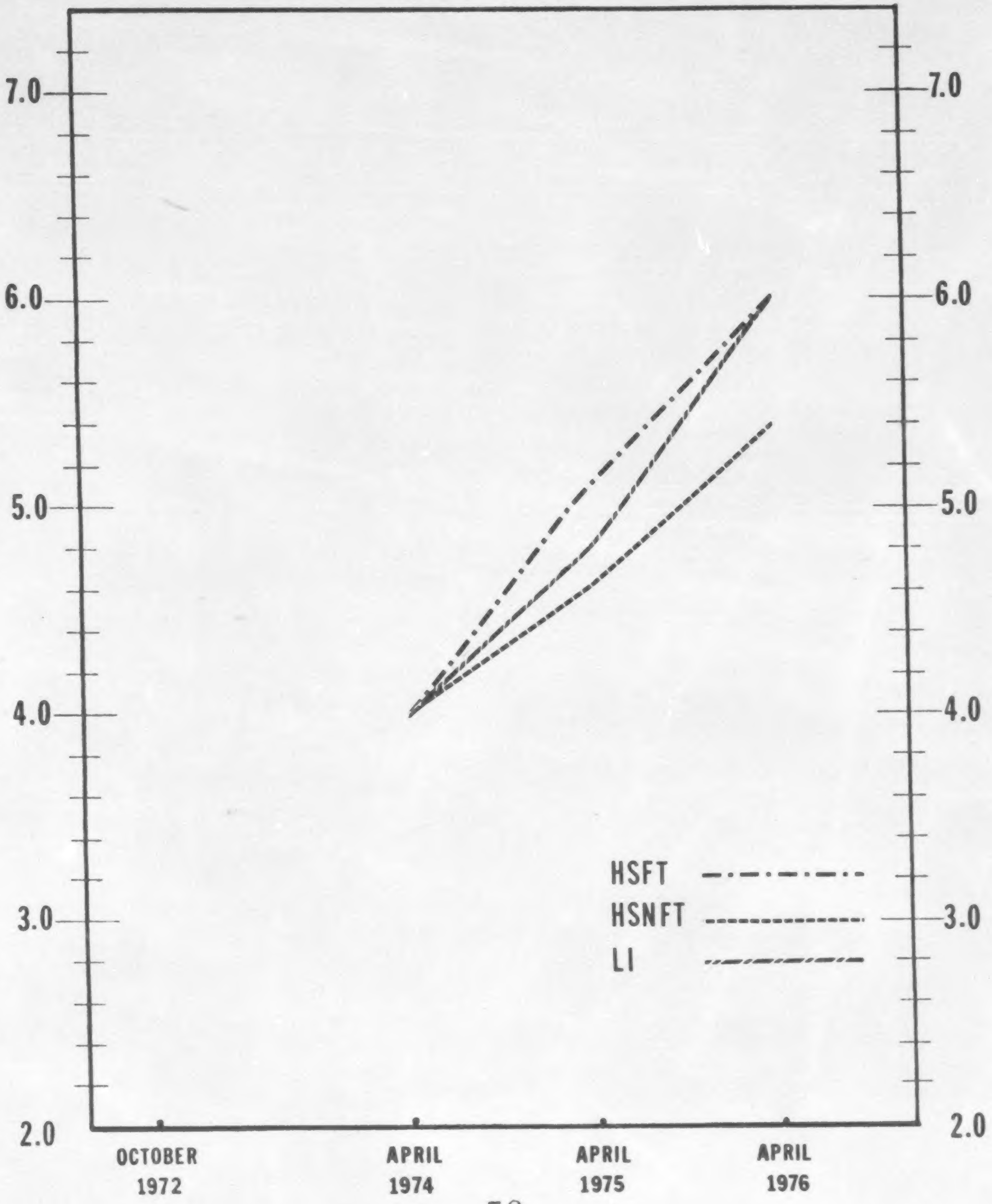


FIGURE 2.7.

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **MATHEMATICS** SUBTEST

GRADES THREE, FOUR, FIVE, AND SIX

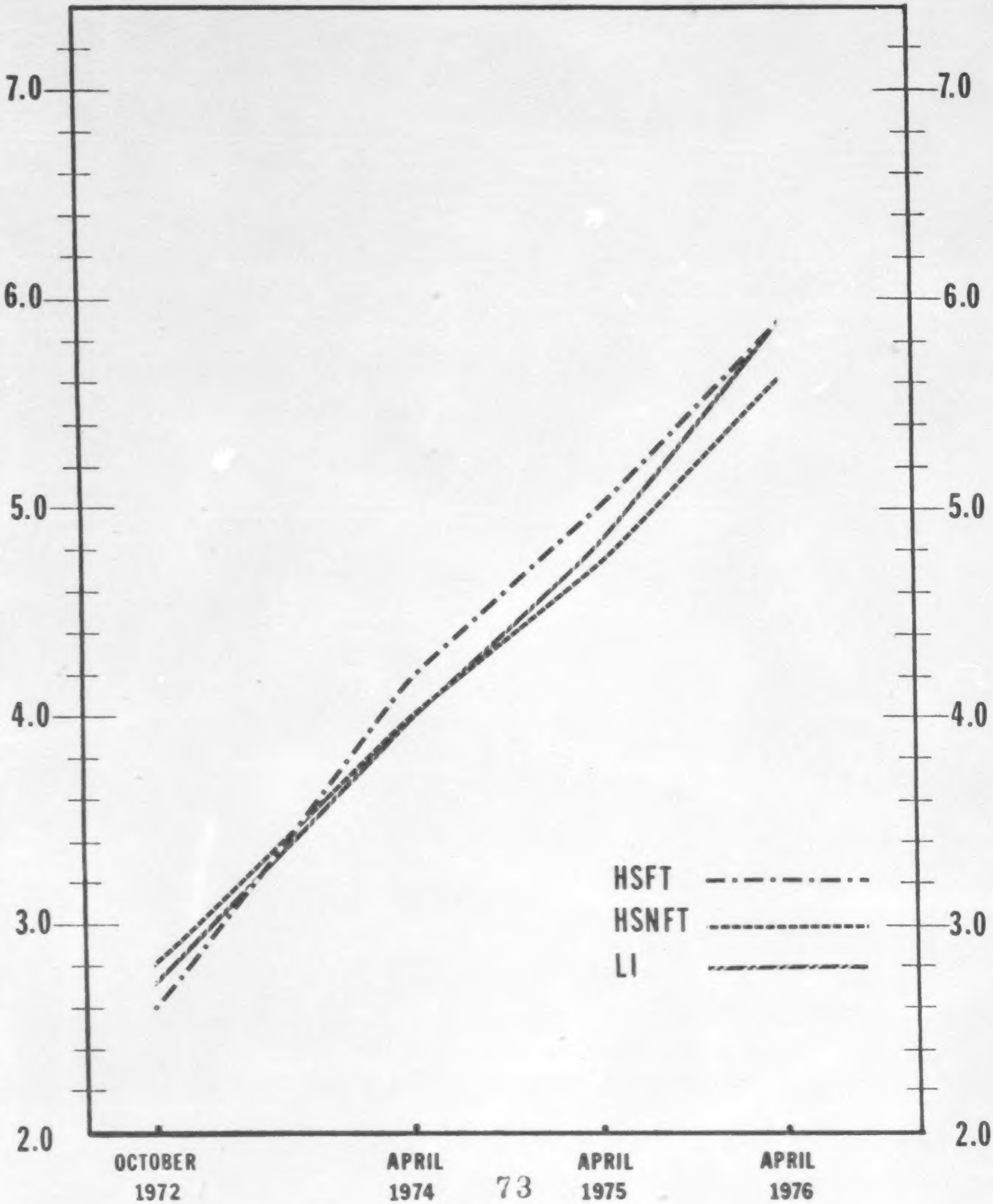


FIGURE 2.8

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT HSFT, HSNFT, AND LI ON THE ITBS **COMPOSITE**

GRADES THREE, FOUR, FIVE, AND SIX

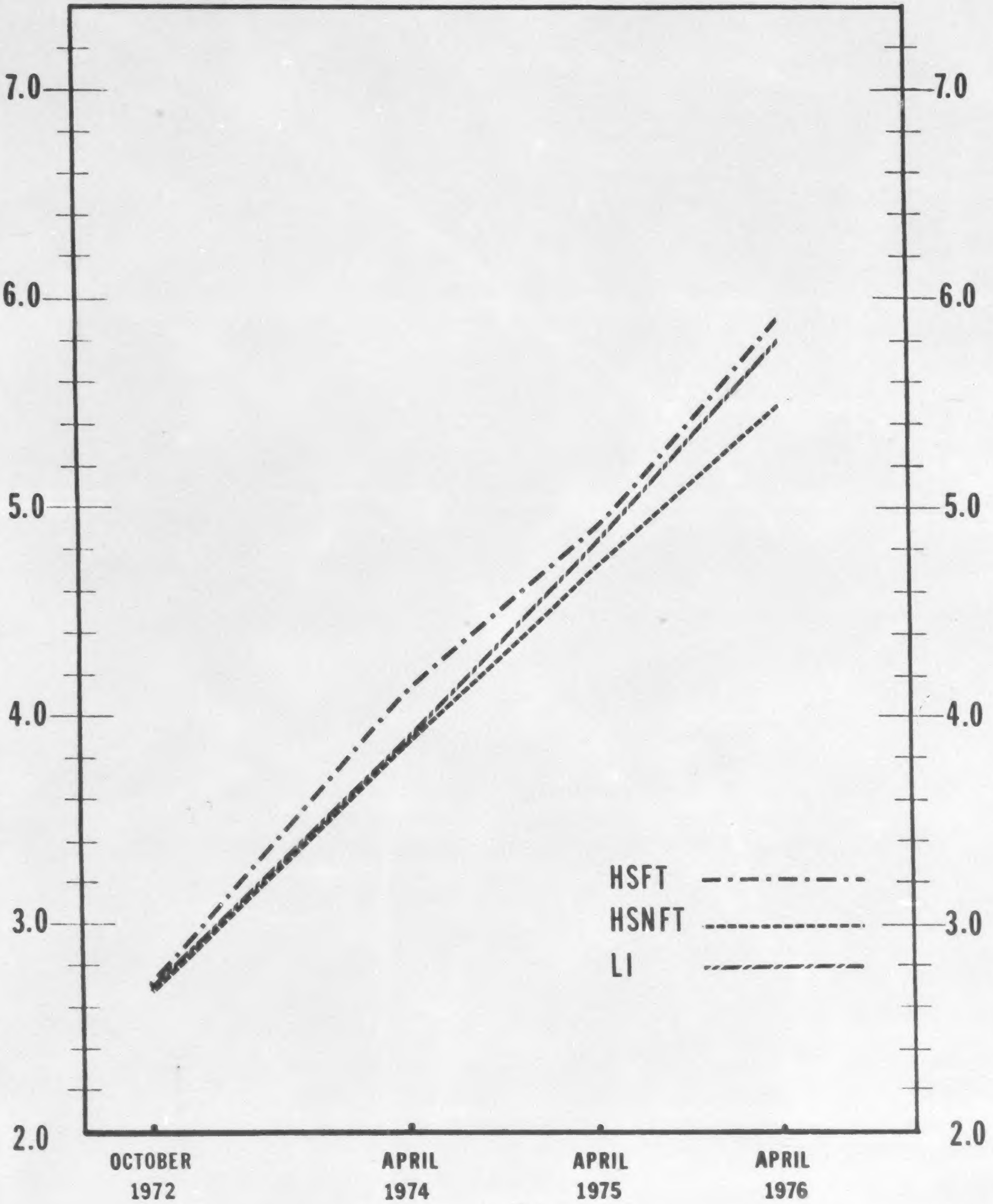


FIGURE 2.9

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT FTCL AND NLI ON THE ITBS **VOCABULARY** SUBTEST

GRADES THREE, FOUR, FIVE, AND SIX

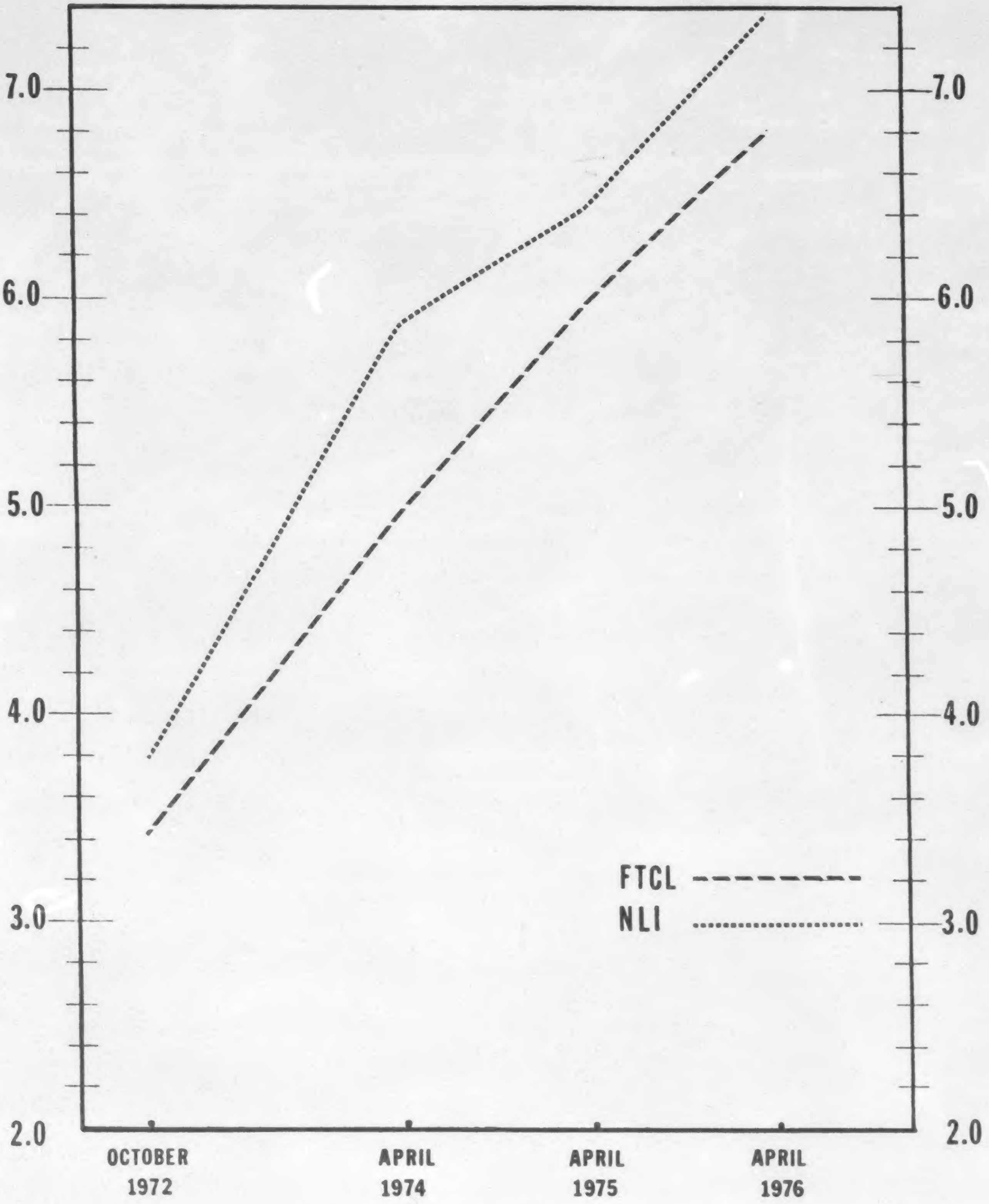


FIGURE 2.10

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT
FTCL AND NLI ON THE ITBS **READING** SUBTEST

GRADES THREE, FOUR, FIVE, AND SIX

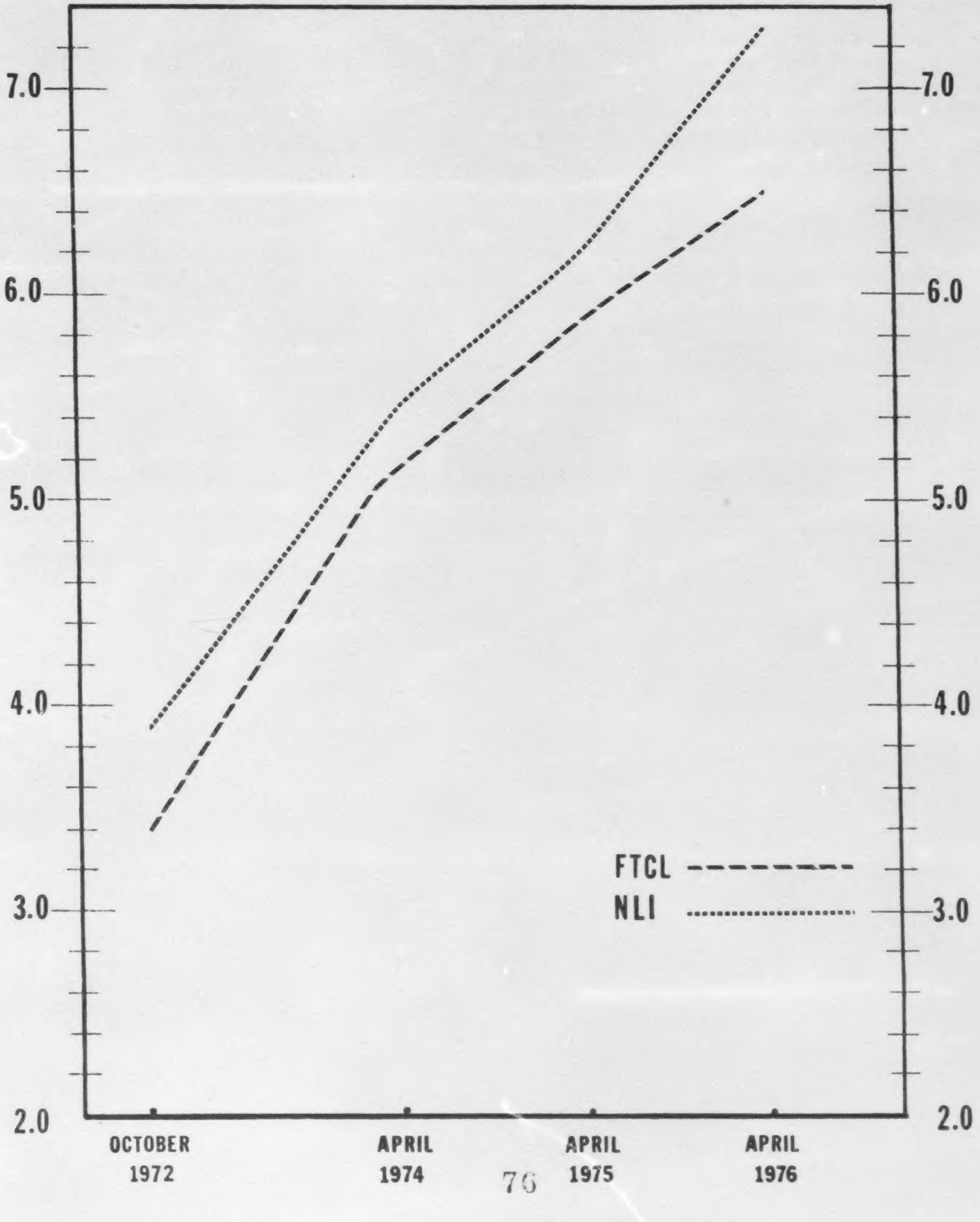


FIGURE 2.11

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT
FTCL AND NLI ON THE ITBS **LANGUAGE** SUBTEST

GRADES THREE, FOUR, FIVE, AND SIX

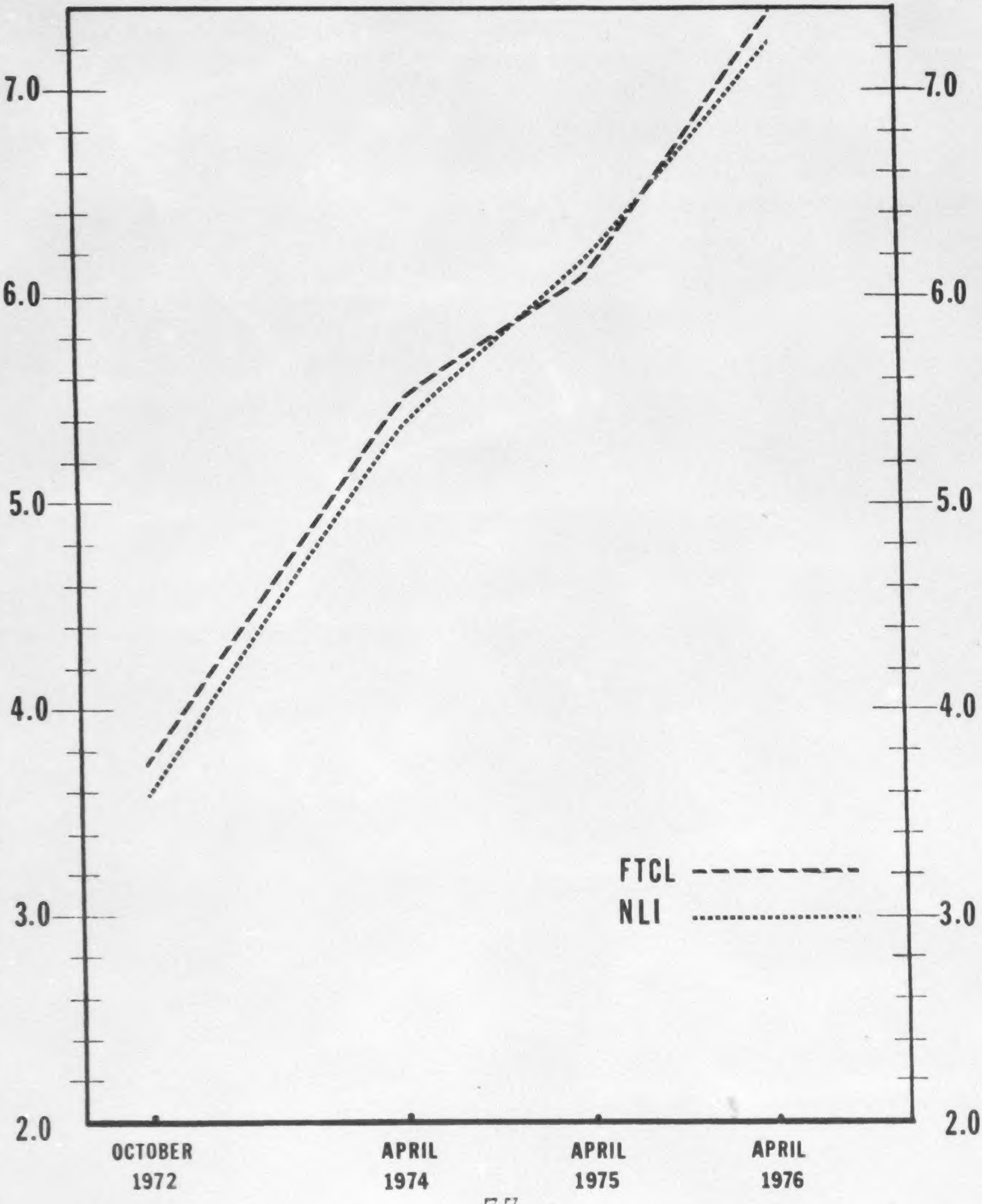


FIGURE 2.12

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT
FTCL AND NLI ON THE ITBS **WORK-STUDY SKILLS** SUBTEST

GRADES FOUR, FIVE, AND SIX

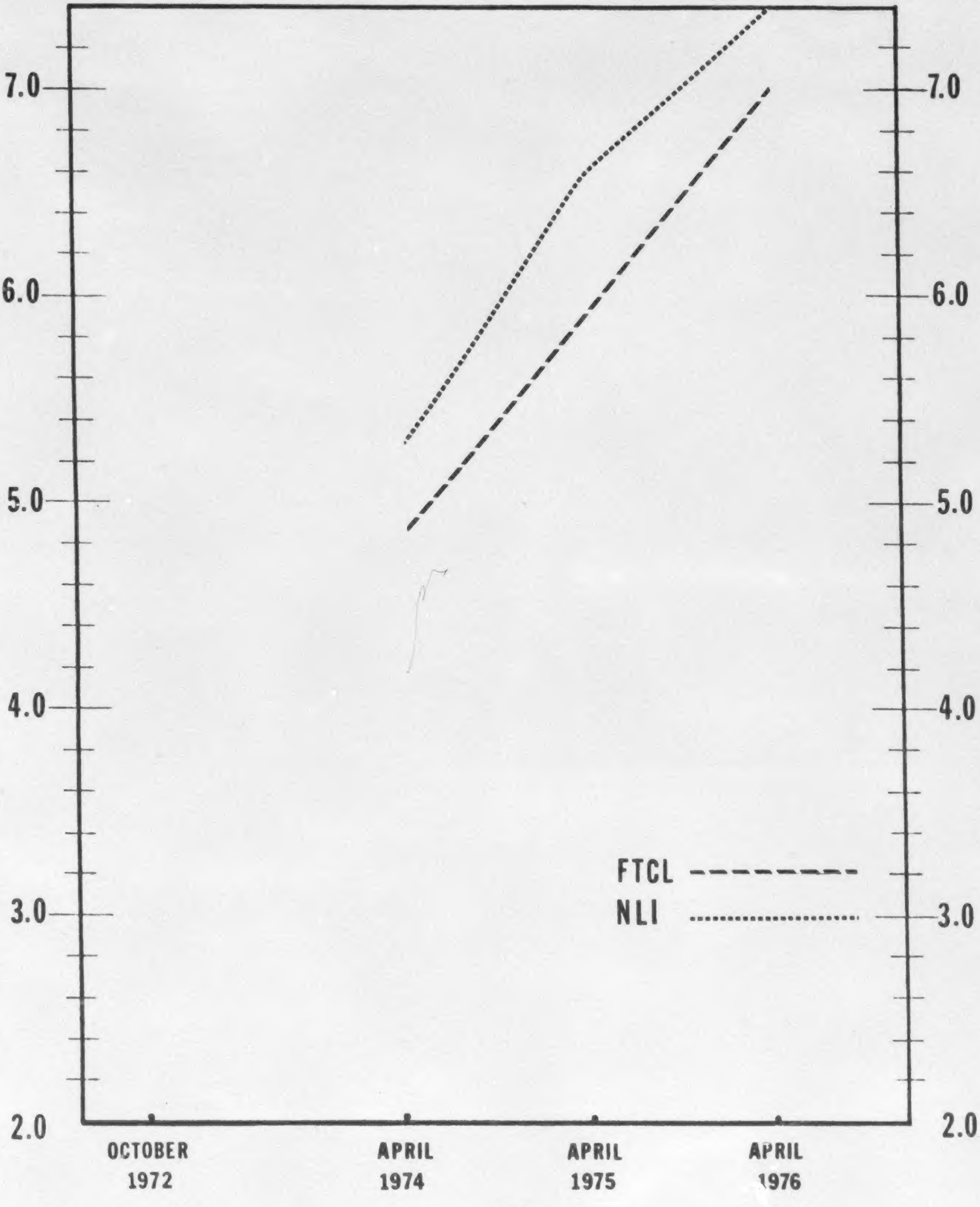


FIGURE 2.13

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT
FTCL AND NLI ON THE ITBS **MATHEMATICS** SUBTEST

GRADES THREE, FOUR, FIVE, AND SIX

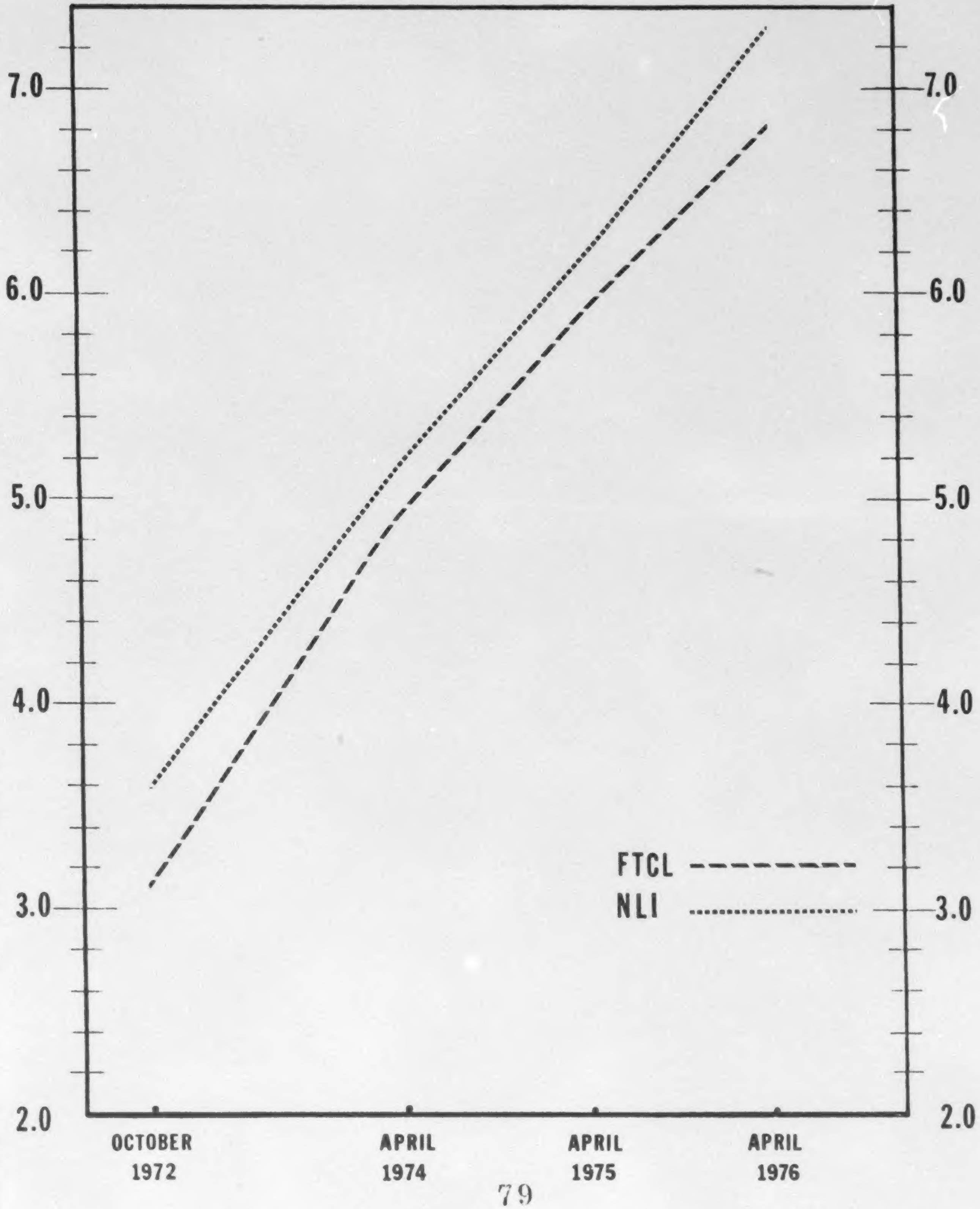
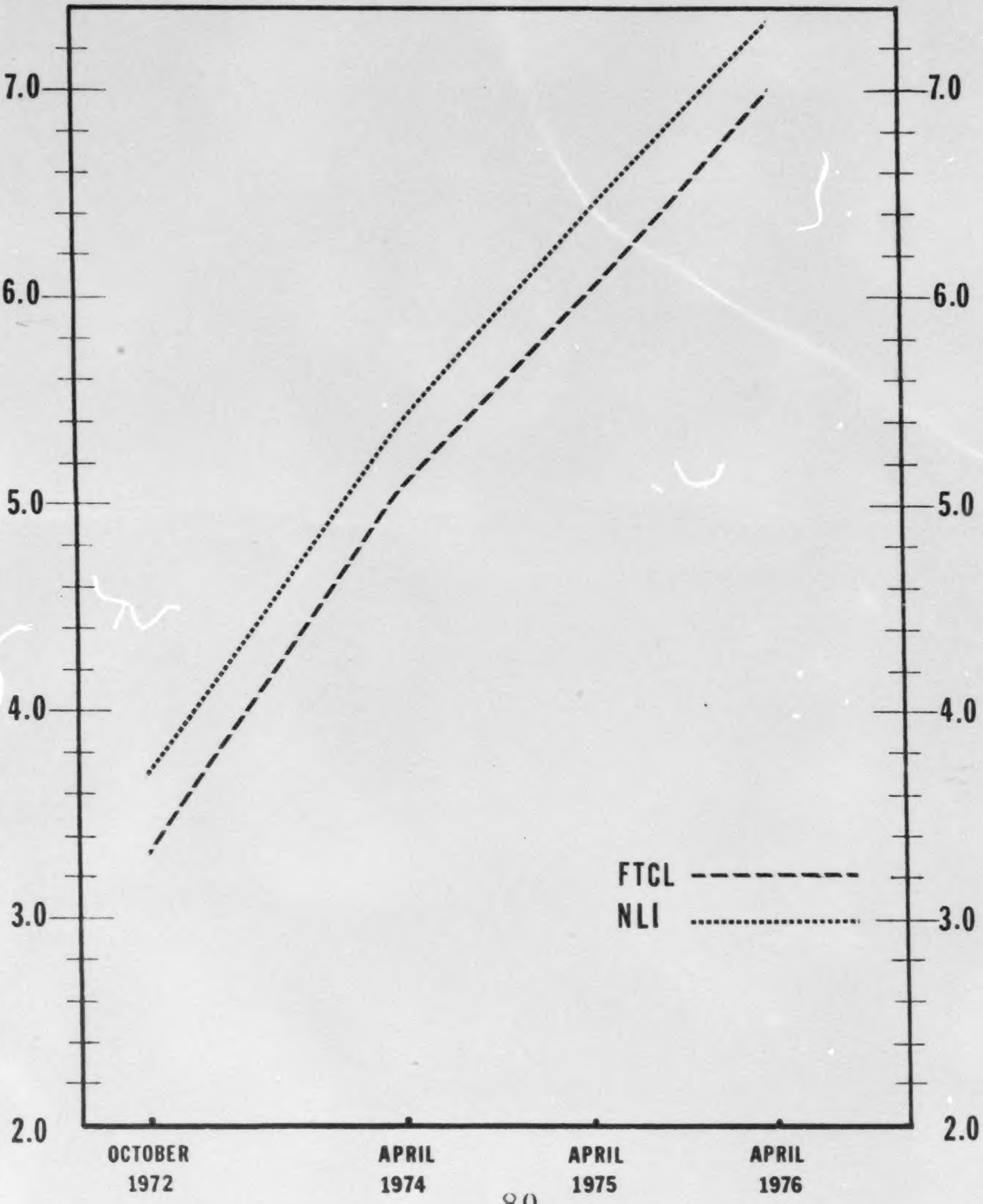


FIGURE 2.14

COMPARATIVE GRADE EQUIVALENTS FOR **2nd** COHORT
FTCL AND NLI ON THE ITBS **COMPOSITE**

GRADES THREE, FOUR, FIVE, AND SIX



SECOND COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, FIVE, AND SIX

October 1972, April 1974, April 1975, and April 1976

GRADE EQUIVALENT COMPARISONS

	HSFT - HSNFT				HSFT - LI				FTCL - NLI			
GRADE LEVEL	3	4	5	6	3	4	5	6	3	4	5	6
Subtests												
VOCABULARY	FT	FT	FT	FT	FT	FT	FT	FT	N	N	N	N
READING	N	N	FT	FT	N	E	N	E	N	N	N	N
LANGUAGE	N	FT	FT	FT(s)	E	FT	FT	FT	FT	FT	N	FT
WORK-STUDY		E	FT	FT(s)		E	FT	E		N	N	N
MATHEMATICS	N	FT	FT	FT	N	FT	FT	E	N(s)	N	N	N
COMPOSITE	E	FT	FT	FT	E	FT	FT	FT	N	N	N	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E - Indicates the groups made equal grade equivalent scores.

N - Indicates the non-Follow Through group made the higher grade equivalent score.

(s) - Indicates the difference in group means was statistically significant. ($p \leq .05$)

SECOND COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, FIVE, AND SIX

October 1972, April 1974, April 1975, and April 1976

GRADE EQUIVALENT GAINS

	HSFT - HSNFT				HSFT - L1				FTCL - NLI			
GRADE LEVEL	3-4	4-5	5-6	Total	3-4	4-5	5-6	Total	3-4	4-5	5-6	Total
Subtests												
VOCABULARY	FT	N	E	FT	FT	N	N	E	E	FT	N	N
READING	FT	FT	E	FT	FT	N	FT	FT	FT	N	N	N
LANGUAGE	FT	N (S)	FT (S)	FT (S)	FT	N	FT	FT	E	N	FT	FT
WORK-STUDY		FT (S)	FT			FT	N			N	FT	
MATHEMATICS	FT	FT	E	FT (S)	FT	E	N	FT	FT	E	N	N
COMPOSITE	FT	FT	FT	FT (S)	FT	E	E	FT	E	N	E	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the greater gain.

E - Indicates the groups made equal gains.

N - Indicates the non-Follow Through group made the greater gain.

(S) - Indicates the difference in group gains was statistically significant. ($p \leq .05$)

The Follow Through groups had higher total gains than their comparison groups on eight of the 12 ITBS subtests. They were equal on one subtest. The low-income Follow Through group had higher total gains than its comparison groups on seven of eight subtests and had equal gains on one. The non-low-income Follow Through group, FTCL, had higher gains than its comparison group on one of the four subtests.

The most recent testing (sixth grade) showed that the low-income Follow Through group, HSFT, had higher grade equivalent scores than the comparison groups on six of the eight subtests and had equal grade equivalents on two of the subtests. The non-low-income Follow Through group, FTCL, had a higher grade equivalent score than its comparison group on only one subtest, Language.

An analysis of the gains of the low-income Follow Through group for this cohort and the First Cohort indicates that the Follow Through program is apparently having some long-term positive effect on the achievement in basic skills for the low income participants.

Since the FTCL-NLI results on the First and Second Cohorts are not consistent, inferences about the non-low-income Follow Through groups cannot be made.

THIRD COHORT

Head Start	1969-70
Kindergarten	1970-71
First Grade	1971-72
Second Grade	1972-73
Third Grade (completed Follow Through Program)	1973-74
Fourth Grade	1974-75
Fifth Grade	1975-76

The Third Cohort was given the ITBS in April 1974, April 1975, and April 1976 as part of the school district basic testing program.

Tables 3.1, 3.2, and 3.3 show the mean score and standard deviation for each group on each subtest. The differences between the means of the groups are analyzed for statistical significance. Tables 3.2 through 3.8 show the mean grade equivalent and percentile for each group.

Figures 3.1 and 3.2 indicate the grade equivalent gains for each group on each subtest of the ITBS.

Figures 3.3 through 3.14 show the progress of the groups relative to each other on each ITBS subtest from April 1974 to April 1976.

TABLE 3.1

THREE-YEAR RESULTS FOR HSFT AND HSNFT ON THE IOWA TESTS OF BASIC SKILLS THIRD COHORT - GRADES THREE, FOUR, AND FIVE

VOCABULARY

	April 1974 Third Grade		April 1975 Fourth Grade		April 1976 Fifth Grade	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	45	24	45	24	45	24
$\bar{x}$	31.11	28.96	40.76	38.92	47.89	44.88
s	10.44	11.10	11.35	10.46	16.03	11.46
t	0.7691 NSD		0.6525 NSD		0.8867 NSD	

READING COMPREHENSION

	April 1974 Third Grade		April 1975 Fourth Grade		April 1976 Fifth Grade	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	45	24	45	24	45	24
$\bar{x}$	32.02	30.92	41.44	40.33	48.64	45.29
s	10.97	11.30	12.90	12.95	13.75	14.64
t	0.3841 NSD		0.3339 NSD		0.9086 NSD	

LANGUAGE SKILLS

	April 1974 Third Grade		April 1975 Fourth Grade		April 1976 Fifth Grade	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	45	24	45	24	45	24
$\bar{x}$	38.91	36.50	43.96	40.33	51.18	47.54
s	11.84	13.39	10.34	11.75	13.10	11.30
t	0.7274 NSD		1.2477 NSD		1.1832 NSD	

TABLE 3.1 (cont'd)

	April 1974 Third Grade		April 1975 Fourth Grade		April 1976 Fifth Grade	
WORK-STUDY SKILLS						
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	(Not given in		45	24	45	24
$\bar{x}$	Third Grade)		43.38	41.75	52.07	50.25
s			9.05	9.22	10.70	8.80
t			0.6907 NSD		0.7436 NSD	
MATHEMATICS SKILLS						
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	45	24	45	24	45	24
$\bar{x}$	32.09	31.54	42.27	40.62	49.89	51.17
s	7.52	8.80	9.44	9.66	10.54	9.49
t	0.2537 NSD		0.6656 NSD		0.5037 NSD	
COMPOSITE						
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
N	45	24	45	24	45	24
$\bar{x}$	33.62	31.96	42.38	40.42	49.93	47.83
s	8.36	9.46	9.02	9.20	11.09	9.43
t	0.7110 NSD		0.8343 NSD		0.8137 NSD	

TABLE 3.2

THREE-YEAR RESULTS FOR HSFT AND LI ON THE IOWA TESTS OF BASIC SKILLS THIRD COHORT - GRADES THREE, FOUR, AND FIVE

VOCABULARY

	April 1974 Third Grade		April 1975 Fourth Grade		April 1976 Fifth Grade	
	HSFT	LI	HSFT	LI	HSFT	LI
N	45	41	45	41	45	41
$\overline{x}$	31.11	31.54	40.76	39.73	47.89	49.24
s	10.44	11.14	11.35	9.96	16.03	10.47
t	0.1802 NSD		0.4403 NSD		0.4626 NSD	

READING COMPREHENSION

	April 1974 Third Grade		April 1975 Fourth Grade		April 1976 Fifth Grade	
	HSFT	LI	HSFT	LI	HSFT	LI
N	45	41	45	41	45	41
$\overline{x}$	32.02	33.85	41.44	40.07	48.64	49.37
s	10.97	9.11	12.90	11.18	13.75	10.66
t	0.8354 NSD		0.5216 NSD		0.2700 NSD	

LANGUAGE SKILLS

	April 1974 Third Grade		April 1975 Fourth Grade		April 1976 Fifth Grade	
	HSFT	LI	HSFT	LI	HSFT	LI
N	45	41	45	41	45	41
$\overline{x}$	38.91	39.49	43.96	40.73	51.18	46.83
s	11.84	13.91	10.34	11.97	13.10	10.39
t	0.2035 NSD		1.3149 NSD		1.6932 NSD	

TABLE 3.2 (cont'd)

	April 1974 Third Grade		April 1975 Fourth Grade		April 1976 Fifth Grade	
WORK-STUDY SKILLS						
	HSFT	LI	HSFT	LI	HSFT	LI
N	(Not given in		45	41	45	41
$\bar{x}$	Third Grade)		43.38	38.90	52.07	48.76
s			9.05	9.76	10.70	7.97
t			2.1728 Sig. at .05		1.6175 NSD	
MATHEMATICS SKILLS						
	HSFT	LI	HSFT	LI	HSFT	LI
N	45	41	45	41	45	41
$\bar{x}$	32.09	31.90	42.27	38.63	49.89	49.46
s	7.52	8.13	9.44	10.60	10.54	8.42
t	0.1088 NSD		1.6518 NSD		0.2053 NSD	
COMPOSITE						
	HSFT	LI	HSFT	LI	HSFT	LI
N	45	41	45	41	45	41
$\bar{x}$	33.62	34.32	42.38	39.51	49.93	48.71
s	8.36	9.08	9.02	9.61	11.09	7.90
t	0.3638 NSD		1.4054 NSD		0.5875 NSD	

TABLE 3.3

THREE-YEAR RESULTS FOR FTCL AND NLI ON THE IOWA TESTS OF BASIC SKILLS THIRD COHORT - GRADES THREE, FOUR, AND FIVE

	April 1974 Third Grade		April 1975 Fourth Grade		April 1976 Fifth Grade	
VOCABULARY						
	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	34	23	34	23	34	23
$\bar{x}$	42.15	44.39	53.56	52.83	61.32	63.17
s	8.85	7.44	10.19	11.56	12.82	12.05
t	1.0155 NSD		0.2413 NSD		0.5438 NSD	
READING COMPREHENSION						
	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	34	23	34	23	34	23
$\bar{x}$	43.18	44.83	52.47	54.91	60.40	65.30
s	12.00	11.71	13.55	13.79	13.14	13.79
t	0.5069 NSD		0.6482 NSD		1.3055 NSD	
LANGUAGE SKILLS						
	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	34	23	34	23	34	23
$\bar{x}$	46.35	50.48	55.88	56.13	60.76	66.43
s	11.32	13.12	9.46	12.47	13.69	12.15
t	1.2053 NSD		0.0793 NSD		1.6144 NSD	

TABLE 3.3 (cont'd)

	April 1974 Third Grade		April 1975 Fourth Grade		April 1976 Fifth Grade	
WORK-STUDY SKILLS						
	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	(Not given in		34	23	34	23
$\overline{x}$	Third Grade)		53.29	52.04	62.59	66.00
s			9.40	12.83	10.74	12.40
t			0.3923 NSD		1.0537 NSD	
MATHEMATICS SKILLS						
	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	34	23	34	23	34	23
$\overline{x}$	38.24	42.30	49.26	51.87	57.82	63.57
s	7.33	7.90	10.02	10.94	12.21	11.69
t	1.9248 NSD		0.8945 NSD		1.7522 NSD	
COMPOSITE						
	FTCL	NLI	FTCL	NLI	FTCL	NLI
N	34	23	34	23	34	23
$\overline{x}$	42.65	45.65	52.88	53.52	60.79	64.96
s	8.79	8.73	9.22	11.38	11.29	11.06
t	1.2471 NSD		0.2197 NSD		1.3561 NSD	

TABLE 3.4

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **HSFT » 3rd** COHORT

GRADES THREE, FOUR, AND FIVE

N = 45

	FORM 5, LEVEL 9 April, 1974: Grade **3**		FORM 5, LEVEL 10 April, 1975: Grade **4**			FORM 5, LEVEL 11 April, 1976: Grade **5**			
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.0)	G.E.	%ile	G.E. Gain (Norm) (1.0)	Total G.E. Gain (Norm) (2.0)
VOCABULARY	3.1	33	4.1	34	1.0	4.8	29	0.7	1.7
READING COMPREHENSION	3.2	35	4.1	34	0.9	4.9	30	0.8	1.7
LANGUAGE SKILLS	3.9	56	4.4	44	0.5	5.1	38	0.7	1.2
WORK-STUDY SKILLS	---	--	4.3	40	---	5.2	39	0.9	---
MATHEMATICS SKILLS	3.2	32	4.2	34	1.0	5.0	31	0.8	1.8
COMPOSITE	3.4	42	4.2	37	0.8	5.0	32	0.8	1.6

TABLE 3.5

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **HSNFT » 3rd** COHORT

GRADES THREE, FOUR, AND FIVE

N = 24

	FORM 5, LEVEL 9 April, 1974: Grade **3**		FORM 5, LEVEL 10 April, 1975: Grade **4**			FORM 5, LEVEL 11 April, 1976: Grade **5**			
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.0)	G.E.	%ile	G.E. Gain (Norm) (1.0)	Total G.E. Gain (Norm) (2.0)
VOCABULARY	2.9	28	3.9	30	1.0	4.5	24	0.6	1.6
READING COMPREHENSION	3.1	32	4.0	32	0.9	4.5	22	0.5	1.4
LANGUAGE SKILLS	3.6	48	4.0	33	0.4	4.8	31	0.8	1.2
WORK-STUDY SKILLS	---	--	4.2	36	---	5.0	32	0.8	---
MATHEMATICS SKILLS	3.2	32	4.1	31	0.9	5.1	34	1.0	1.9
COMPOSITE	3.2	34	4.0	31	0.8	4.8	27	0.8	1.6

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **LI » 3rd** COHORT

GRADES THREE, FOUR, AND FIVE

N = 41

	FORM 5, LEVEL 9 April, 1974: Grade **3**		FORM 5, LEVEL 10 April, 1975: Grade **4**			FORM 5, LEVEL 11 April, 1976: Grade **5**			
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.0)	G.E.	%ile	G.E. Gain (Norm) (1.0)	Total G.E. Gain (Norm) (2.0)
VOCABULARY	3.2	35	4.0	32	0.8	4.9	31	0.9	1.7
READING COMPREHENSION	3.4	41	4.0	32	0.6	4.9	30	0.9	1.5
LANGUAGE SKILLS	3.9	56	4.1	36	0.2	4.7	29	0.6	0.8
WORK-STUDY SKILLS	---	--	3.9	24	---	4.9	29	1.0	---
MATHEMATICS SKILLS	3.2	32	3.9	25	0.7	4.9	28	1.0	1.7
COMPOSITE	3.4	42	4.0	31	0.6	4.9	30	0.9	1.5

TABLE 3.7

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **FTCL » 3rd** COHORT

GRADES THREE, FOUR, AND FIVE

N = 34

	FORM 5, LEVEL 9 April, 1974: Grade **3**		FORM 5, LEVEL 10 April, 1975: Grade **4**			FORM 5, LEVEL 11 April, 1976: Grade **5**			
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.0)	G.E.	%ile	G.E. Gain (Norm) (1.0)	Total G.E. Gain (Norm) (2.0)
VOCABULARY	4.2	65	5.4	69	1.2	6.1	60	0.7	1.9
READING COMPREHENSION	4.3	66	5.2	63	0.9	6.0	57	0.8	1.7
LANGUAGE SKILLS	4.6	73	5.6	70	1.0	6.1	59	0.5	1.5
WORK-STUDY SKILLS	---	--	5.3	71	---	6.3	69	1.0	---
MATHEMATICS SKILLS	3.8	57	4.9	59	1.1	5.8	55	0.9	2.0
COMPOSITE	4.3	71	5.3	68	1.0	6.1	62	0.8	1.8

TABLE 3.8

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **NLI** » 3rd COHORT

GRADES THREE, FOUR, AND FIVE

N = 23

	FORM 5, LEVEL 9 April, 1974: Grade 3		FORM 5, LEVEL 10 April, 1975: Grade 4			FORM 5, LEVEL 11 April, 1976: Grade 5			
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.0)	G.E.	%ile	G.E. Gain (Norm) (1.0)	Total G.E. Gain (Norm) (2.0)
VOCABULARY	4.4	72	5.3	66	0.9	6.3	65	1.0	1.9
READING COMPREHENSION	4.5	71	5.5	70	1.0	6.5	69	1.0	2.0
LANGUAGE SKILLS	5.0	81	5.6	70	0.6	6.6	69	1.0	1.6
WORK-STUDY SKILLS	---	--	5.2	68	---	6.6	75	1.4	---
MATHEMATICS SKILLS	4.2	70	5.2	68	1.0	6.4	71	1.2	2.2
COMPOSITE	4.6	79	5.4	71	0.8	65.	72	1.1	1.9

FIGURE 3.1

GRADE EQUIVALENT GAINS FOR **HSFT, HSNFT & LI - 3rd COHORT**
ITBS, APRIL 1974 - APRIL 1976
THIRD GRADE - FIFTH GRADE
(National Norm 2.0)

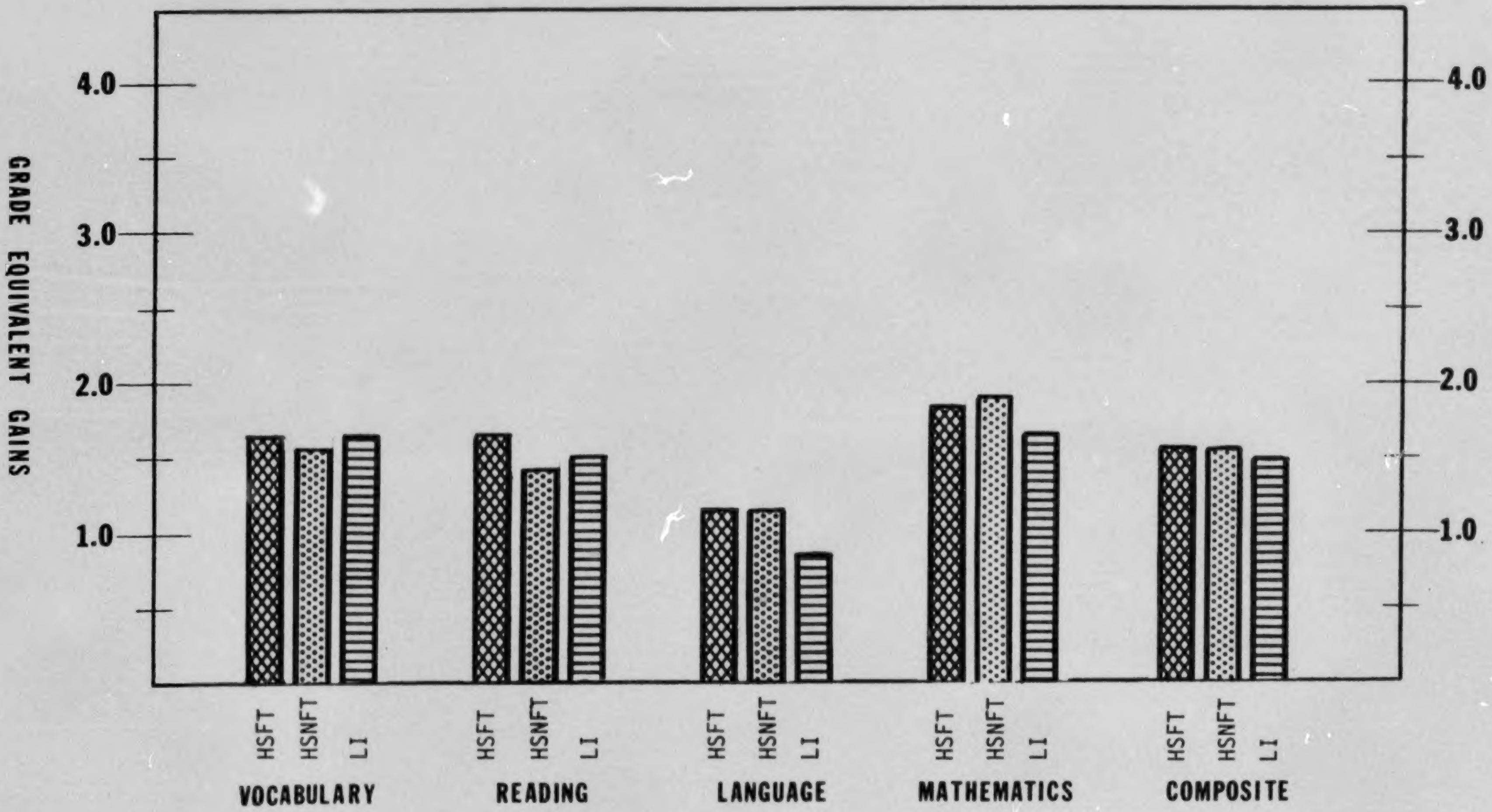


FIGURE 3.2

GRADE EQUIVALENT GAINS FOR **FTCL & NLI - 3rd COHORT**
ITBS, APRIL 1974 - APRIL 1976
THIRD GRADE - FIFTH GRADE
(National Norm 2.0)

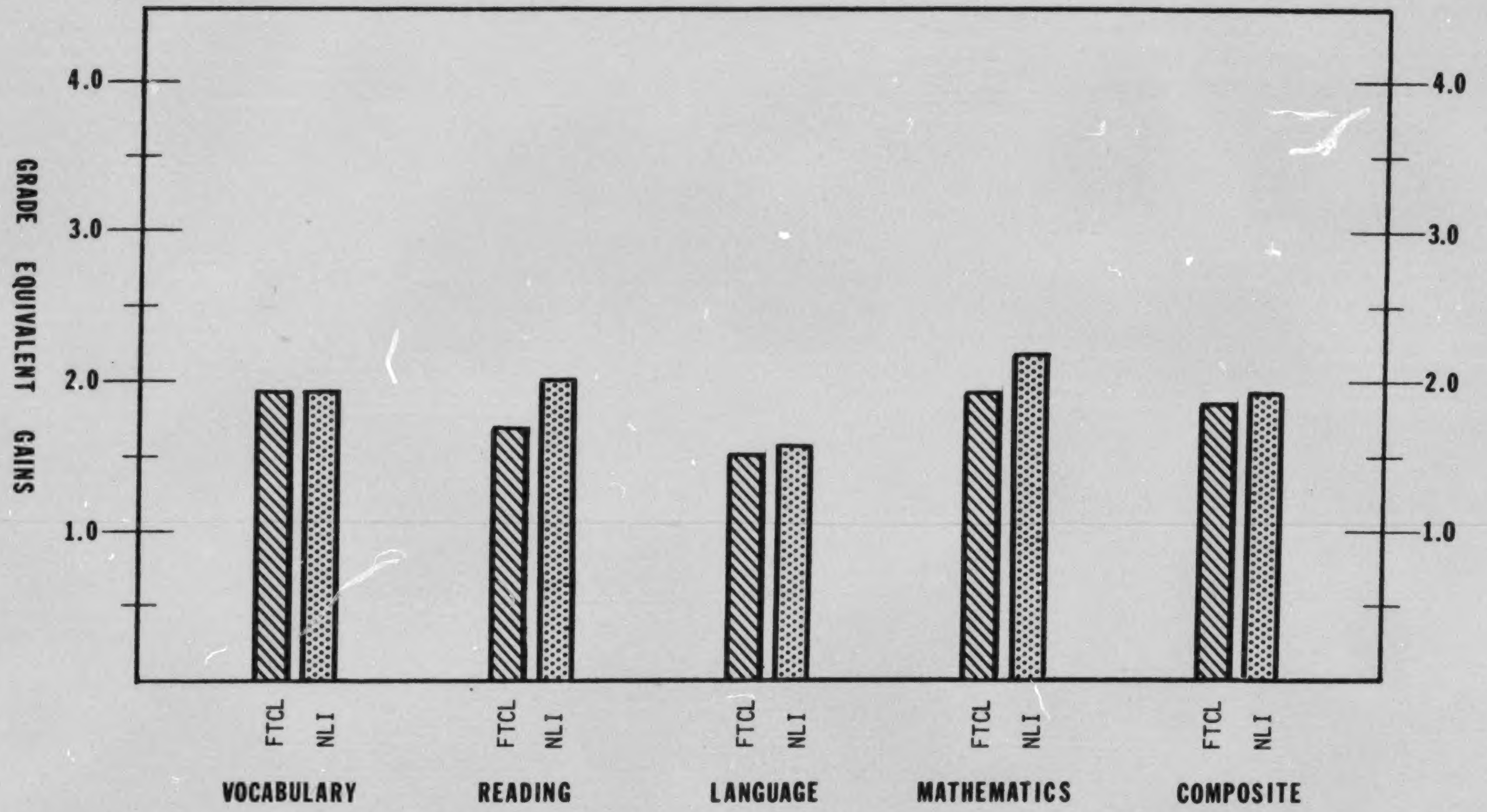


FIGURE 3.3

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT HSFT, HSNFT, AND LI ON THE ITBS **VOCABULARY** SUBTEST

GRADES THREE, FOUR, AND FIVE

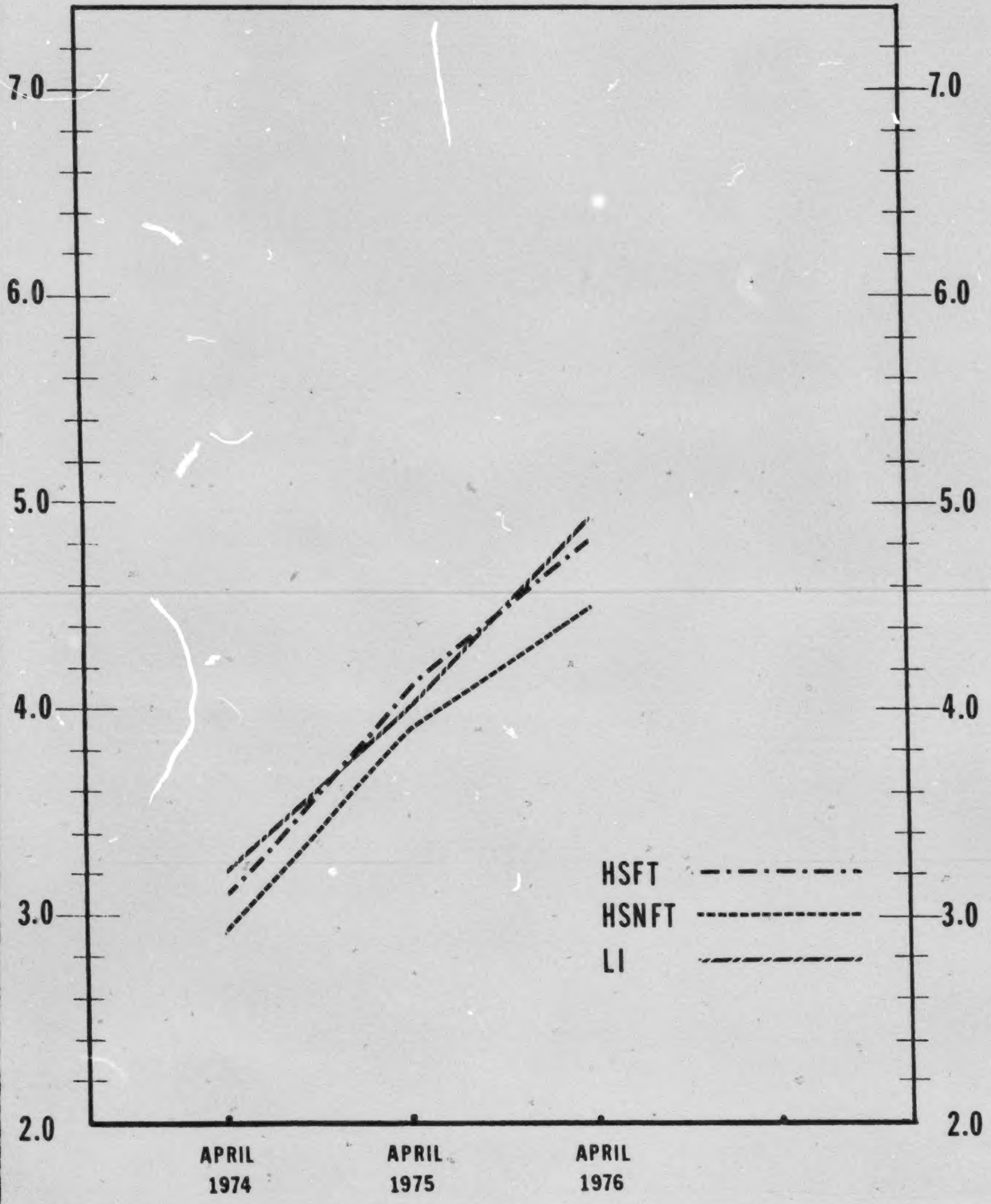


FIGURE 3.4

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **READING** SUBTEST

GRADES THREE, FOUR, AND FIVE

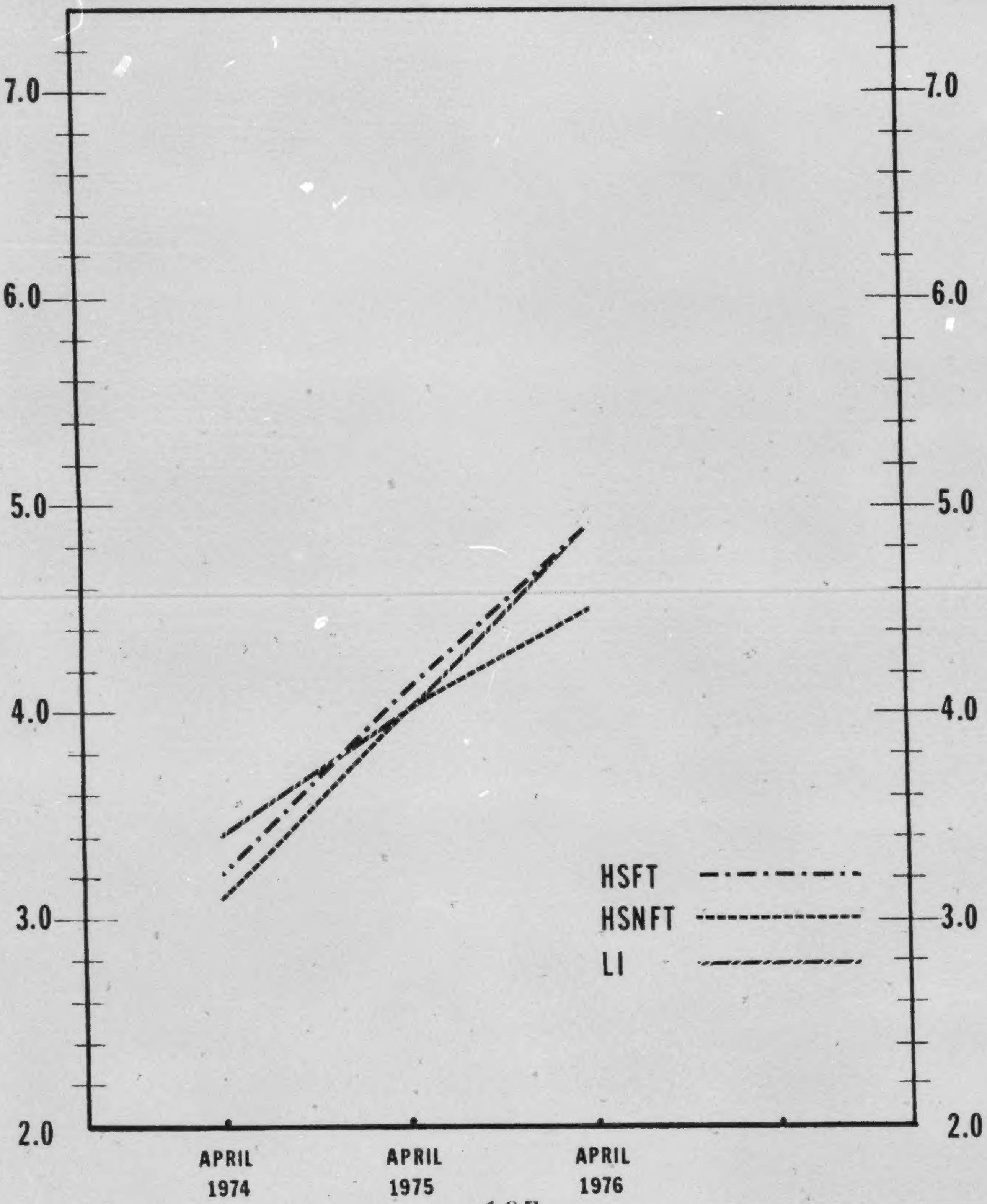


FIGURE 3.5

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **LANGUAGE** SUBTEST

GRADES THREE, FOUR, AND FIVE

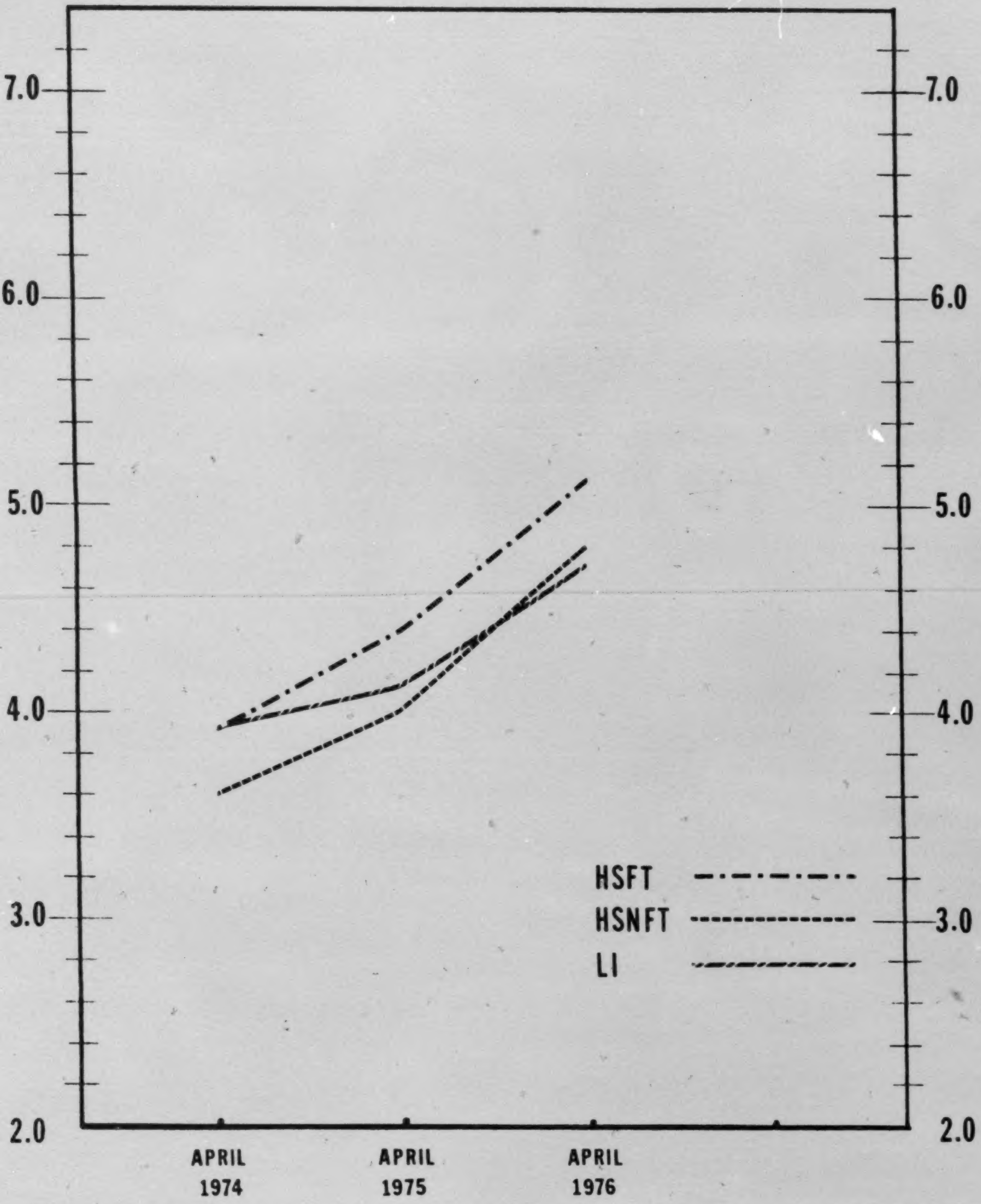


FIGURE 3.6

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **WORK-STUDY SKILLS** SUBTEST

GRADES FOUR AND FIVE

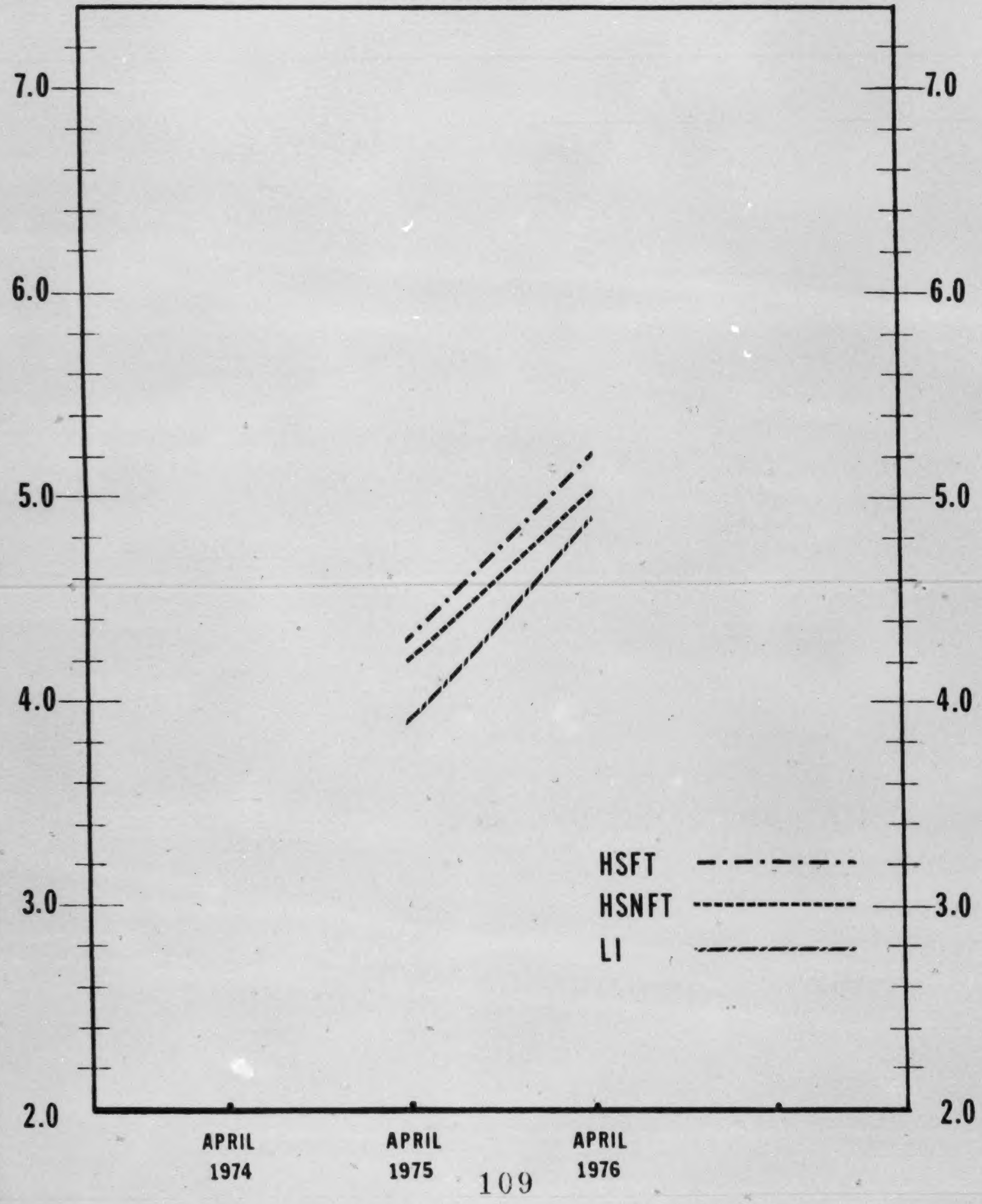


FIGURE 3.7

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **MATHEMATICS** SUBTEST

GRADES THREE, FOUR, AND FIVE

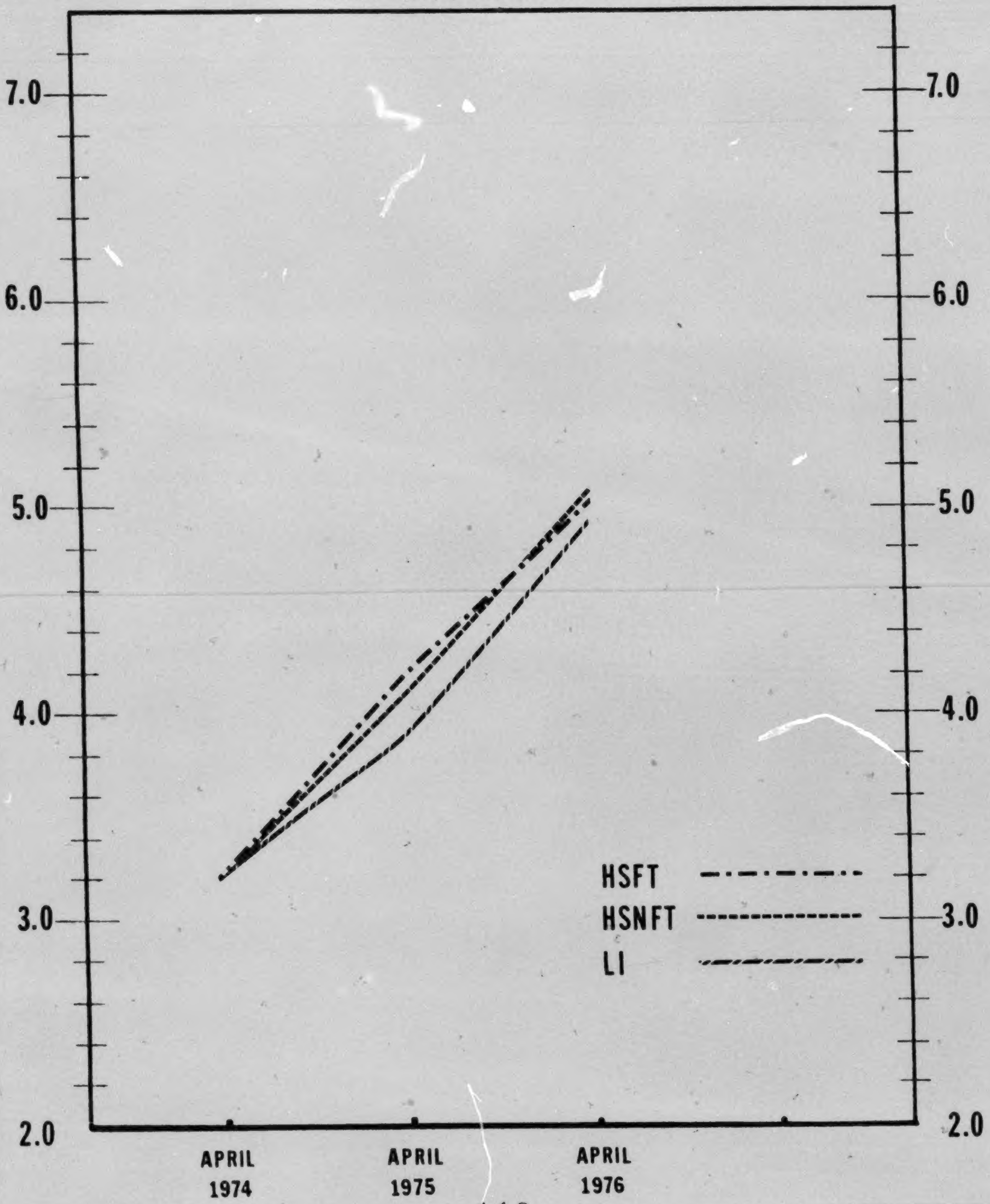


FIGURE 3.8
COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **COMPOSITE**

GRADES THREE, FOUR, AND FIVE

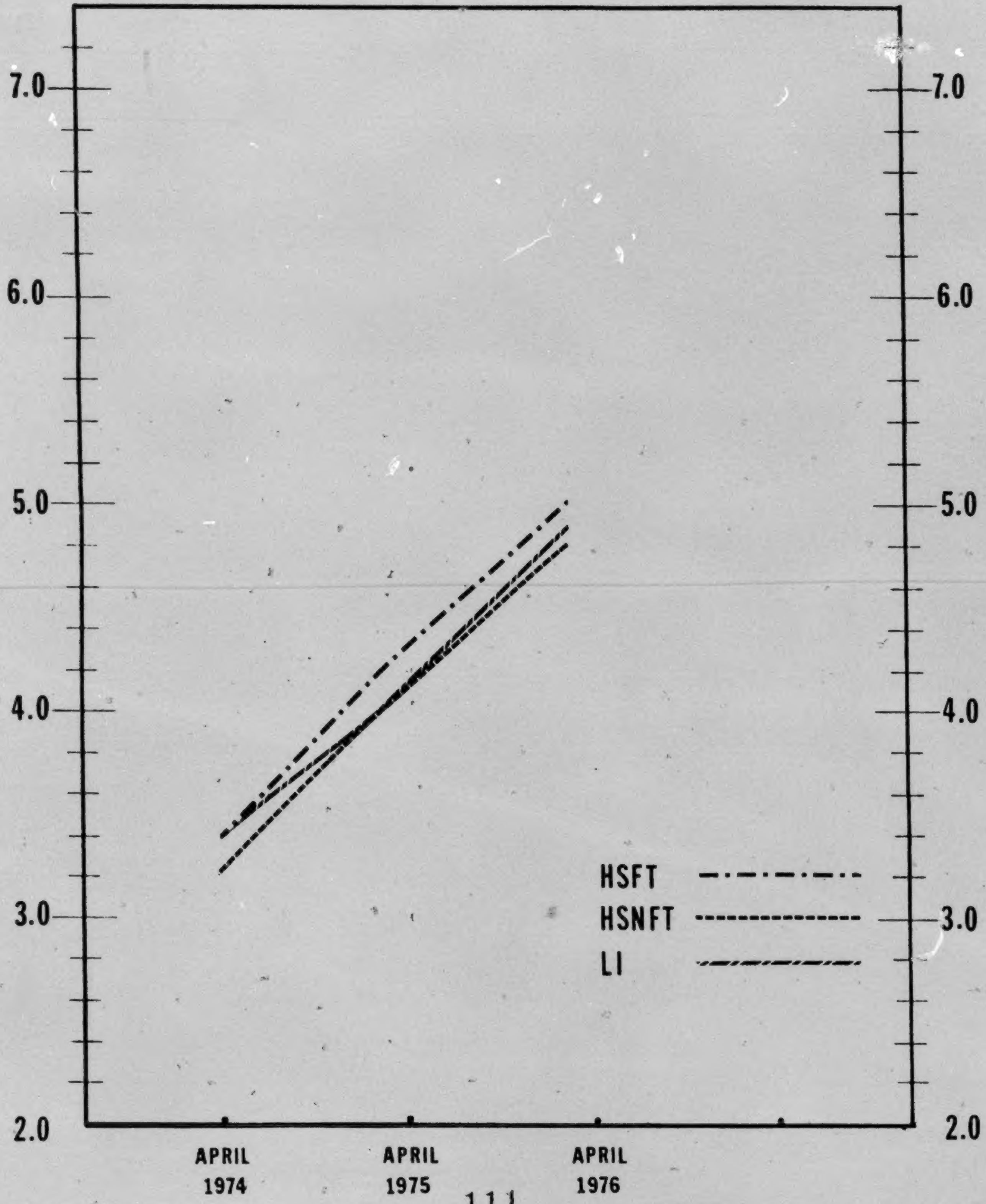


FIGURE 3.9

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT FTCL AND NLI ON THE ITBS **VOCABULARY** SUBTEST

GRADES THREE, FOUR, AND FIVE

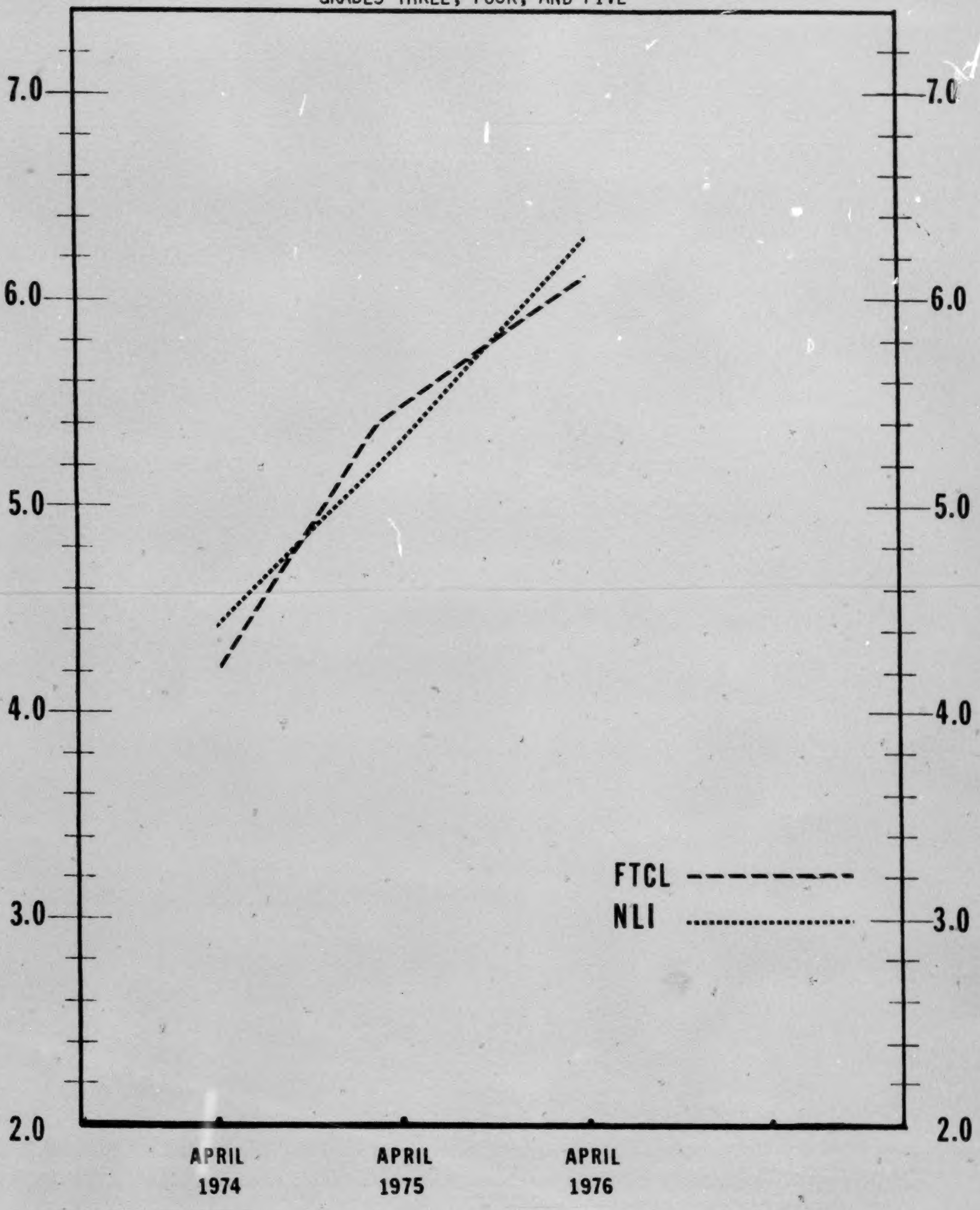


FIGURE 3.10

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT
FTCL AND NLI ON THE ITBS **READING** SUBTEST

GRADES THREE, FOUR, AND FIVE

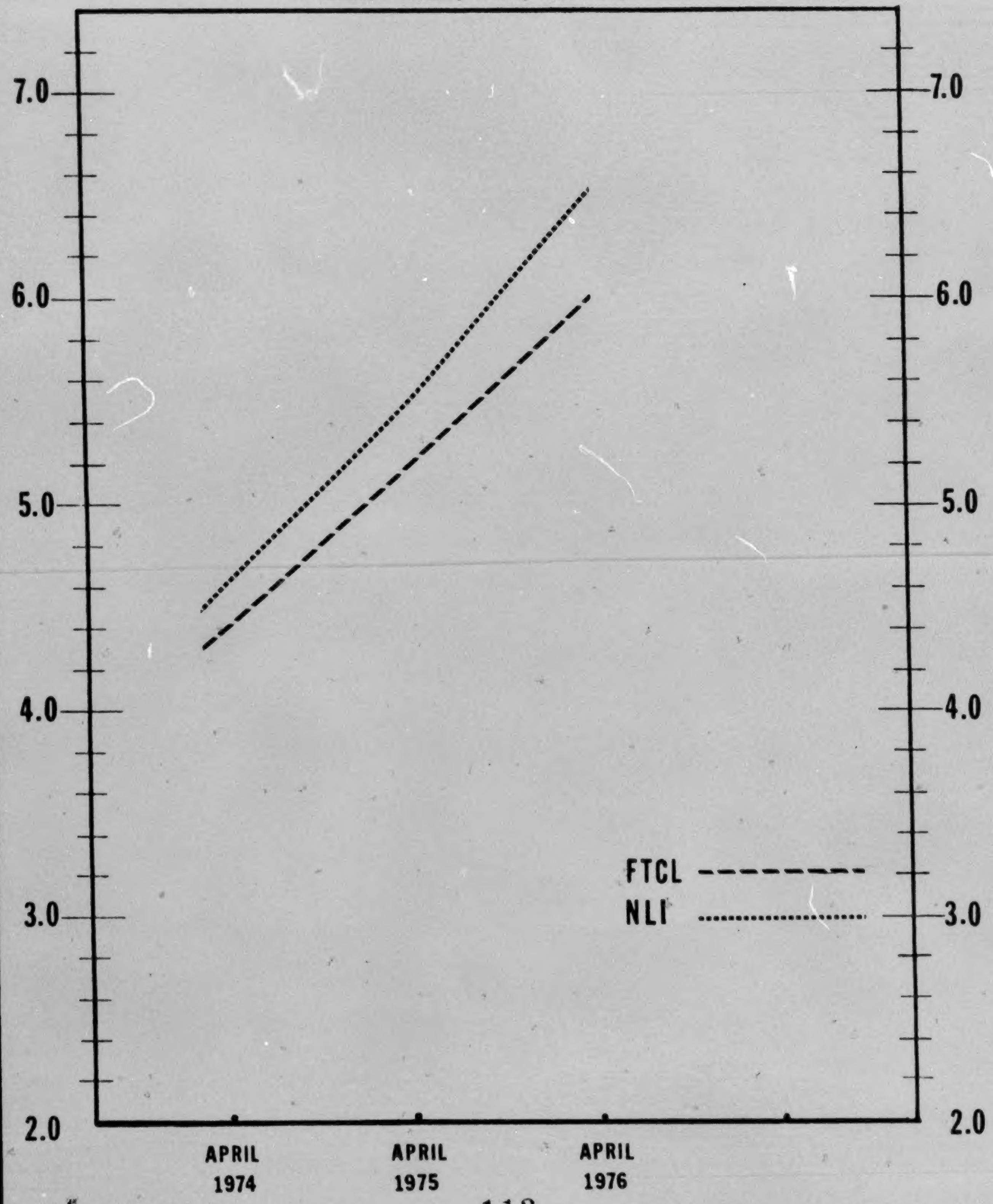


FIGURE 3.11

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT FTCL AND NLI ON THE ITBS **LANGUAGE** SUBTEST

GRADES THREE, FOUR, AND FIVE

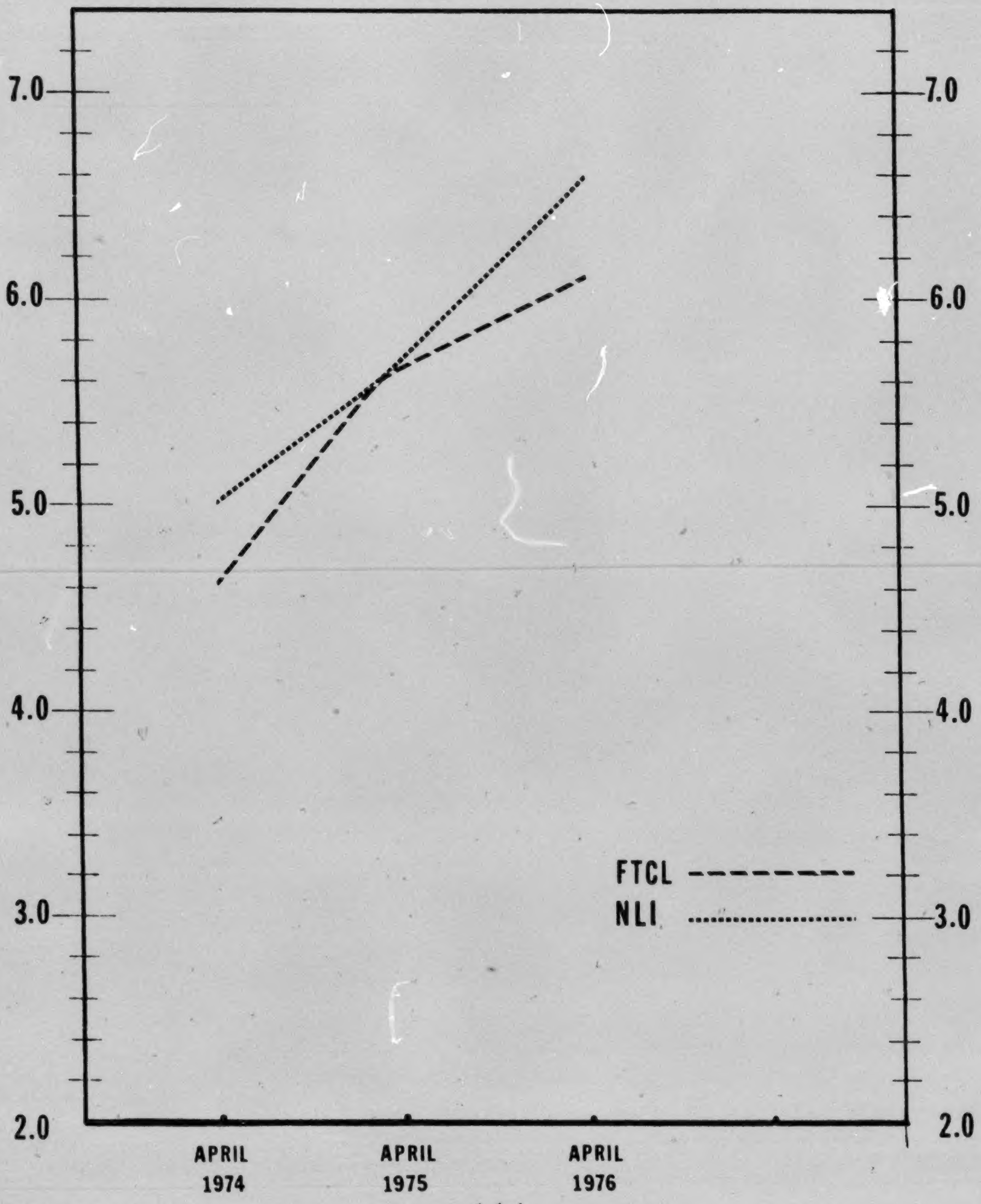


FIGURE 3.12

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT
FTCL AND NLI ON THE ITBS **WORK-STUDY SKILLS** SUBTEST

GRADES FOUR AND FIVE

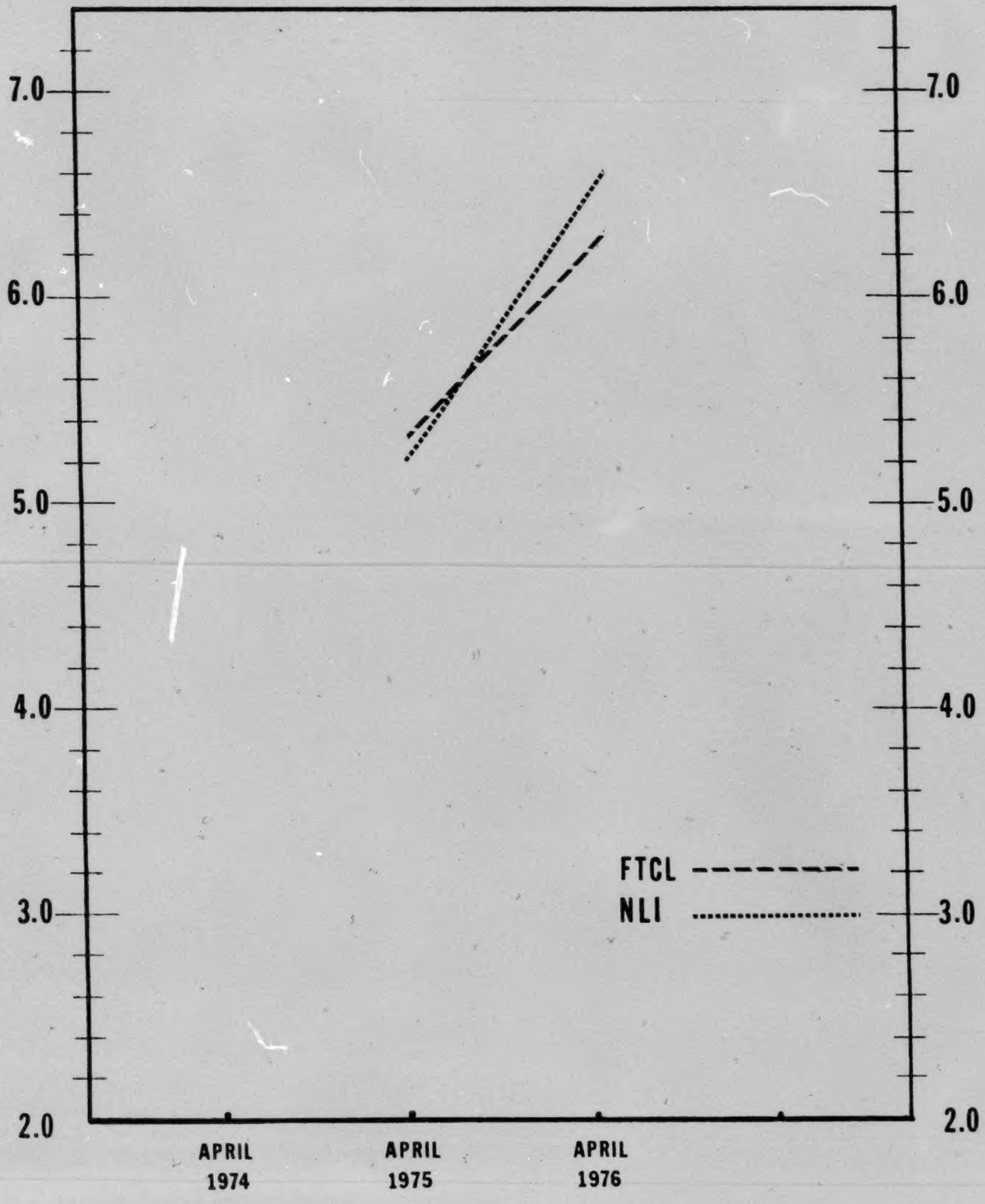


FIGURE 3.13

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT
FTCL AND NLI ON THE ITBS **MATHEMATICS** SUBTEST

GRADES THREE, FOUR, AND FIVE

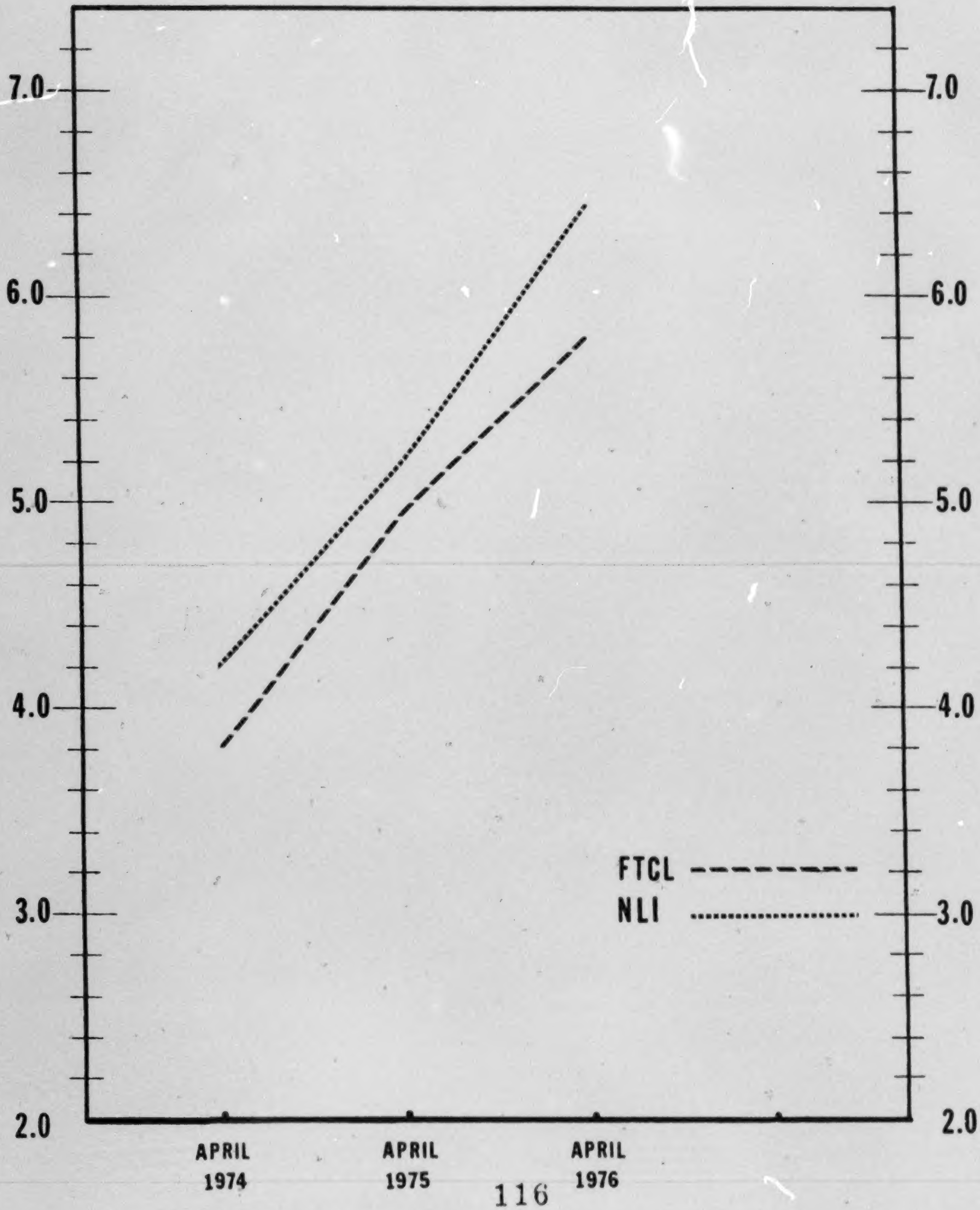
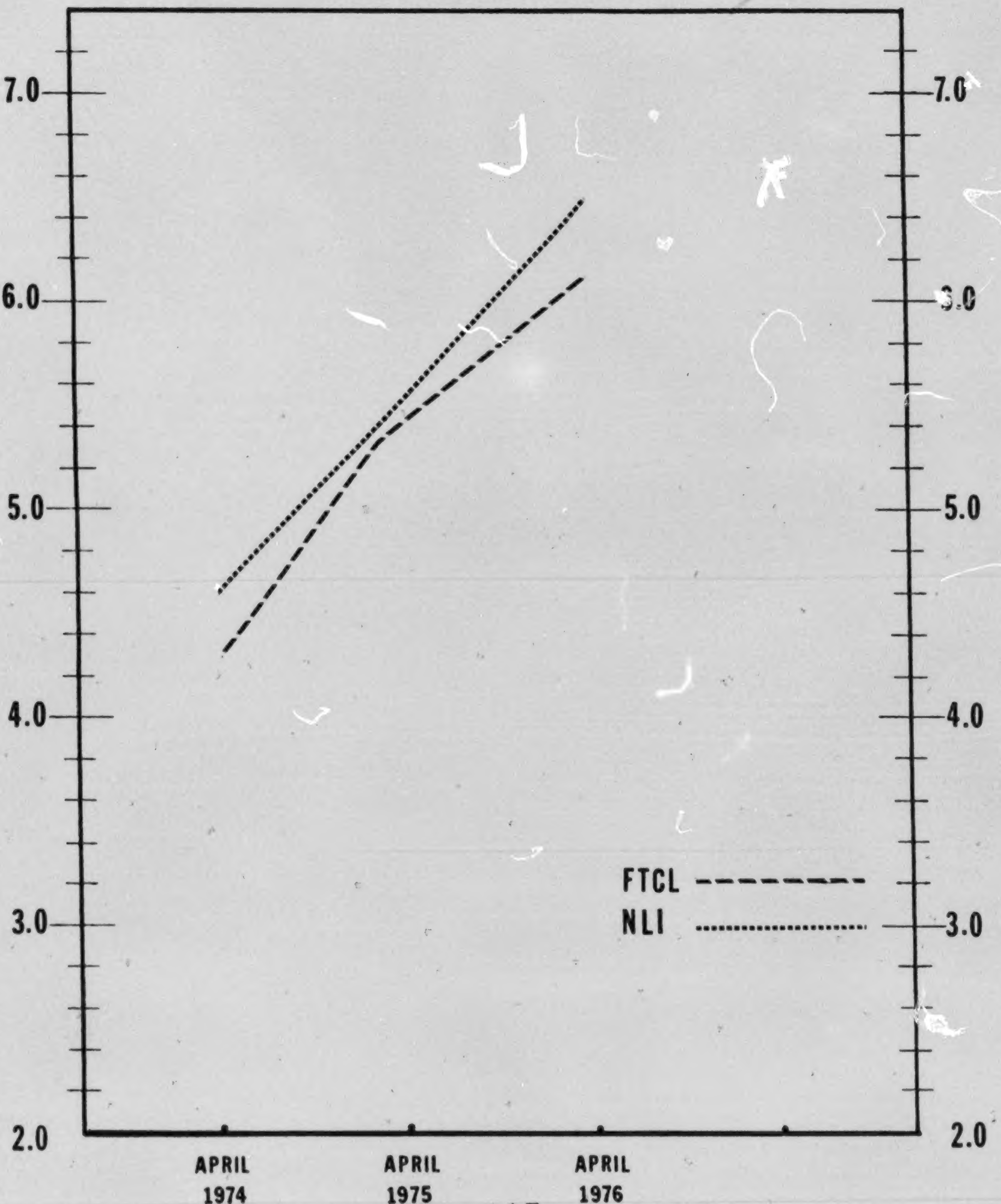


FIGURE 3.14

COMPARATIVE GRADE EQUIVALENTS FOR **3rd** COHORT FTCL AND NLI ON THE ITBS **COMPOSITE**

GRADES THREE, FOUR, AND FIVE



THIRD COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, AND FIVE

April 1974, April 1975, and April 1976

GRADE EQUIVALENT COMPARISONS

	HSFT - HSNFT			HSFT - LI			FTCL - NLI		
GRADE LEVEL	3	4	5	3	4	5	3	4	5
Subtests									
VOCABULARY	FT	FT	FT	N	FT	N	N	FT	N
READING	FT	FT	FT	N	FT	E	N	N	N
LANGUAGE	FT	FT	FT	E	FT	FT	N	E	N
WORK-STUDY		FT	FT		FT$^{(s)}$	FT		FT	N
MATHEMATICS	E	FT	N	E	FT	FT	N	N	N
COMPOSITE	FT	FT	FT	E	FT	FT	N	N	N

KEY:

FT – Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E – Indicates the groups made equal grade equivalent scores.

N – Indicates the non-Follow Through group made the higher grade equivalent score.

(S) – Indicates the difference in group means was statistically significant. ($p \leq .05$)

THIRD COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE, FOUR, AND FIVE

April 1974, April 1975, and April 1976

GRADE EQUIVALENT GAINS

	HSFT - HSNFT			HSFT - LI			FTCL - NLI		
GRADE LEVEL	3-4	4-5	Total	3-4	4-5	Total	3-4	4-5	Total
Subtests									
VOCABULARY	N	FT	FT	FT	N	N	FT	N	E
READING	E	FT	FT	FT	N	FT	N	N	N
LANGUAGE	FT	E	E	FT	FT	FT$^{(s)}$	FT	N$^{(s)}$	N
WORK-STUDY		FT			N			N$^{(s)}$	
MATHEMATICS	FT	N	N	FT	N	E	FT	N	N
COMPOSITE	FT	FT	E	FT$^{(s)}$	N	FT	FT	N$^{(s)}$	N

KEY: FT - Indicates the Follow Through group (HSFT or FTCL) made the greater gain.

E - Indicates the groups made equal gains.

N - Indicates the non-Follow Through group made the greater gain.

(s) - Indicates the difference in group gains was statistically significant. ($p \leq .05$)

The Follow Through groups had higher total gains than their non-Follow Through comparison groups on four of the 12 subtests (four subtests for each comparison: Vocabulary, Reading, Language, and Mathematics). These four higher gains were made by the low-income group, HSFT. The groups had equal gains on three of the 12 subtests. Two of these were on the low-income comparisons. The FTCL group and the NLI group were equal on the Vocabulary subtest. The FTCL group made lesser gains on the other three subtests.

On the fifth grade test the HSFT group achieved higher grade equivalents than its comparison group on five of eight subtests. The FTCL group had lower grade equivalents than its comparison group on all four subtests.

FOURTH COHORT

Head Start	1970-71
Kindergarten	1971-72
First Grade	1972-73
Second Grade	1973-74
Third Grade (completed Follow Through Program)	1974-75
Fourth Grade	1975-76

The Fourth Cohort took the ITBS in April 1975 and April 1976. Mean scores, standard deviations, and the "t" statistic for the comparison groups are given in Tables 4.1, 4.2, and 4.3. Tables 4.4 through 4.8 give the mean grade equivalent and percentile for each group on each subtest.

Figures 4.1 and 4.2 indicate the grade equivalent gain for each group on each subtest of the ITBS.

Figures 4.3 through 4.12 show the progress of the groups relative to each other on each ITBS subtest from April 1975 to April 1976.

TABLE 4.1

TWO-YEAR RESULTS FOR HSFT AND HSNFT ON THE IOWA TESTS OF BASIC SKILLS FOURTH COHORT - GRADES THREE AND FOUR

	April 1975 Third Grade		April 1976 Fourth Grade	
VOCABULARY				
	HSFT	HSNFT	HSFT	HSNFT
N	39	37	39	37
$\bar{x}$	28.64	31.11	38.23	35.62
s	9.14	7.63	10.55	12.13
t	1.2632 NSD		0.9851 NSD	
READING COMPREHENSION				
	HSFT	HSNFT	HSFT	HSNFT
N	39	37	39	37
$\bar{x}$	29.51	33.03	39.13	39.16
s	9.31	10.44	11.14	11.60
t	1.5253 NSD		0.0128 NSD	
LANGUAGE SKILLS				
	HSFT	HSNFT	HSFT	HSNFT
N	39	37	39	37
$\bar{x}$	31.62	36.49	40.46	40.16
s	13.37	12.62	10.18	10.25
t	1.6119 NSD		0.1260 NSD	

TABLE 4.1 (cont'd)

WORK-STUDY SKILLS

	April 1975 Third Grade		April 1976 Fourth Grade	
	HSFT	HSNFT	HSFT	HSNFT
N	(Not given in		39	37
$\bar{x}$	Third Grade)		39.79	40.86
s			7.67	9.17
t			0.5431 NSD	

MATHEMATICS SKILLS

	April 1975 Third Grade		April 1976 Fourth Grade	
	HSFT	HSNFT	HSFT	HSNFT
N	39	37	39	37
$\bar{x}$	28.69	32.65	39.21	39.08
s	7.55	8.36	7.73	7.75
t	2.1327 Sig. at .05		0.0689 NSD	

COMPOSITE

	April 1975 Third Grade		April 1976 Fourth Grade	
	HSFT	HSNFT	HSFT	HSNFT
N	39	37	39	37
$\bar{x}$	29.72	33.49	39.41	38.97
s	8.23	8.15	8.20	8.65
t	1.9779 NSD		0.2229 NSD	

TABLE 4.2

TWO-YEAR RESULTS FOR HSFT AND LI ON THE IOWA TESTS OF BASIC SKILLS FOURTH COHORT - GRADES THREE AND FOUR

	April 1975 Third Grade		April 1976 Fourth Grade	
VOCABULARY				
	HSFT	LI	HSFT	LI
N	39	29	39	29
$\overline{x}$	28.64	32.03	38.23	40.00
s	9.14	9.12	10.55	9.74
t	1.4925 NSD		0.7040 NSD	
READING COMPREHENSION				
	HSFT	LI	HSFT	LI
N	39	29	39	29
$\overline{x}$	29.51	31.45	39.13	38.48
s	9.31	7.19	11.14	10.38
t	0.9530 NSD		0.2420 NSD	
LANGUAGE SKILLS				
	HSFT	LI	HSFT	LI
N	39	29	39	29
$\overline{x}$	31.62	34.17	40.46	41.69
s	13.37	12.16	10.18	9.66
t	0.8092 NSD		0.4987 NSD	

TABLE 4.2 (cont'd)

WORK-STUDY SKILLS

	April 1975 Third Grade		April 1976 Fourth Grade	
	HSFT	LI	HSFT	LI
N	(Not given in		39	29
$\bar{x}$	Third Grade)		39.79	39.17
s			7.67	6.18
t			0.3529 NSD	

MATHEMATICS SKILLS

	April 1975 Third Grade		April 1976 Fourth Grade	
	HSFT	LI	HSFT	LI
N	39	29	39	29
$\bar{x}$	28.69	31.48	39.21	39.90
s	7.55	5.91	7.73	6.23
t	1.6847 NSD		0.4020 NSD	

COMPOSITE

	April 1975 Third Grade		April 1976 Fourth Grade	
	HSFT	LI	HSFT	LI
N	39	29	39	29
$\bar{x}$	29.72	32.38	39.41	39.83
s	8.23	6.66	8.20	6.73
t	1.4500 NSD		0.2268 NSD	

TABLE 4.3

TWO-YEAR RESULTS FOR FTCL AND NLI ON THE IOWA TESTS OF BASIC SKILLS FOURTH COHORT - GRADES THREE AND FOUR

	April 1975 Third Grade		April 1976 Fourth Grade	
VOCABULARY				
	FTCL	NLI	FTCL	NLI
N	30	35	30	35
$\bar{x}$	36.67	45.20	49.27	54.51
s	11.31	8.53	10.21	12.06
t	3.3330 Sig. at .01		1.8705 NSD	
READING COMPREHENSION				
	FTCL	NLI	FTCL	NLI
N	30	35	30	35
$\bar{x}$	38.47	47.03	50.73	57.29
s	10.46	11.06	13.30	12.04
t	3.1533 Sig. at .01		2.0350 Sig. at .05	
LANGUAGE SKILLS				
	FTCL	NLI	FTCL	NLI
N	30	35	30	35
$\bar{x}$	41.67	48.77	53.30	55.29
s	13.61	13.41	11.42	11.43
t	2.0786 Sig. at .05		0.6878 NSD	

TABLE 4.3 (cont'd)

	April 1975 Third Grade		April 1976 Fourth Grade	
WORK-STUDY SKILLS				
	FTCL	NLI	FTCL	NLI
N	(Not given in		30	35
$\bar{x}$	Third Grade)		51.00	53.60
s			10.37	11.29
t			0.9520 NSD	
MATHEMATICS SKILLS				
	FTCL	NLI	FTCL	NLI
N	30	35	30	35
$\bar{x}$	35.43	42.29	48.97	53.63
s	8.98	10.03	8.98	11.49
t	2.8598 Sig. at .01		1.8058 NSD	
COMPOSITE				
	FTCL	NLI	FTCL	NLI
N	30	35	30	35
$\bar{x}$	38.23	45.83	50.73	54.86
s	9.94	8.92	9.64	10.86
t	3.1678 Sig. at .01		1.5964 NSD	

TABLE 4.4

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **HSFT » 4th** COHORT

GRADES THREE AND FOUR

N = 39

	FORM 5, LEVEL 9 April, 1975: Grade **3**		FORM 5, LEVEL 10 April, 1976: Grade **4**		
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.0)
VOCABULARY	2.9	28	3.8	28	0.9
READING COMPREHENSION	3.0	29	3.9	29	0.9
LANGUAGE SKILLS	3.2	35	4.0	33	0.8
WORK-STUDY SKILLS	---	--	4.0	28	---
MATHEMATICS SKILLS	2.9	20	3.9	25	1.0
COMPOSITE	3.0	26	3.9	28	0.9

TABLE 4.5

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **HSNFT»3rd** COHORT

GRADES THREE AND FOUR

N = 37

	FORM 5, LEVEL 9 April, 1975: Grade 3		FORM 5, LEVEL 10 April, 1976: Grade 4		
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.0)
VOCABULARY	3.1	33	3.6	24	0.5
READING COMPREHENSION	3.3	38	3.9	29	0.6
LANGUAGE SKILLS	3.6	48	4.0	33	0.4
WORK-STUDY SKILLS	---	--	4.1	32	---
MATHEMATICS SKILLS	3.3	36	3.9	25	0.6
COMPOSITE	3.3	38	3.9	28	0.6

TABLE 4.6

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **LI » 3rd** COHORT

GRADES THREE AND FOUR

N = 29

	FORM 5, LEVEL 9 April, 1975: Grade 3		FORM 5, LEVEL 10 April, 1976: Grade 4		
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.0)
VOCABULARY	3.2	35	4.0	32	0.8
READING COMPREHENSION	3.1	32	3.8	27	0.7
LANGUAGE SKILLS	3.4	41	4.2	39	0.8
WORK-STUDY SKILLS	---	--	3.9	24	---
MATHEMATICS SKILLS	3.1	28	4.0	28	0.9
COMPOSITE	3.2	34	4.0	31	0.8

TABLE 4.7

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **FTCL » 3rd** COHORT

GRADES THREE AND FOUR

N = 30

	FORM 5, LEVEL April, 1975: Grade 3		FORM 5, LEVEL 10 April, 1976: Grade 4		
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.0)
VOCABULARY	3.7	49	4.9	55	1.2
READING COMPREHENSION	3.8	52	5.1	60	1.3
LANGUAGE SKILLS	4.2	64	5.3	64	1.1
WORK-STUDY SKILLS	---	--	5.1	66	---
MATHEMATICS SKILLS	3.5	44	4.9	59	1.4
COMPOSITE	3.8	55	5.1	63	1.3

TABLE 4.8

GRADE EQUIVALENTS, GRADE EQUIVALENT GAINS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **NLI» 3rd** COHORT

GRADES THREE AND FOUR

N = 35

	FORM 5, LEVEL 9 April, 1975: Grade 3		FORM 5, LEVEL 10 April, 1976: Grade 4		
	G.E.	%ile	G.E.	%ile	G.E. Gain (Norm) (1.0)
VOCABULARY	4.5	75	5.5	72	1.0
READING COMPREHENSION	4.7	76	5.7	76	1.0
LANGUAGE SKILLS	4.9	80	5.5	68	0.6
WORK-STUDY SKILLS	---	--	5.4	73	---
MATHEMATICS SKILLS	4.2	70	5.4	74	1.2
COMPOSITE	4.6	79	5.5	74	0.9

FIGURE 4.1

GRADE EQUIVALENT GAINS FOR **HSFT, HSNFT & LI - 4th COHORT**
ITBS, APRIL 1975 - APRIL 1976
THIRD GRADE - FOURTH GRADE
(National Norm 1.0)

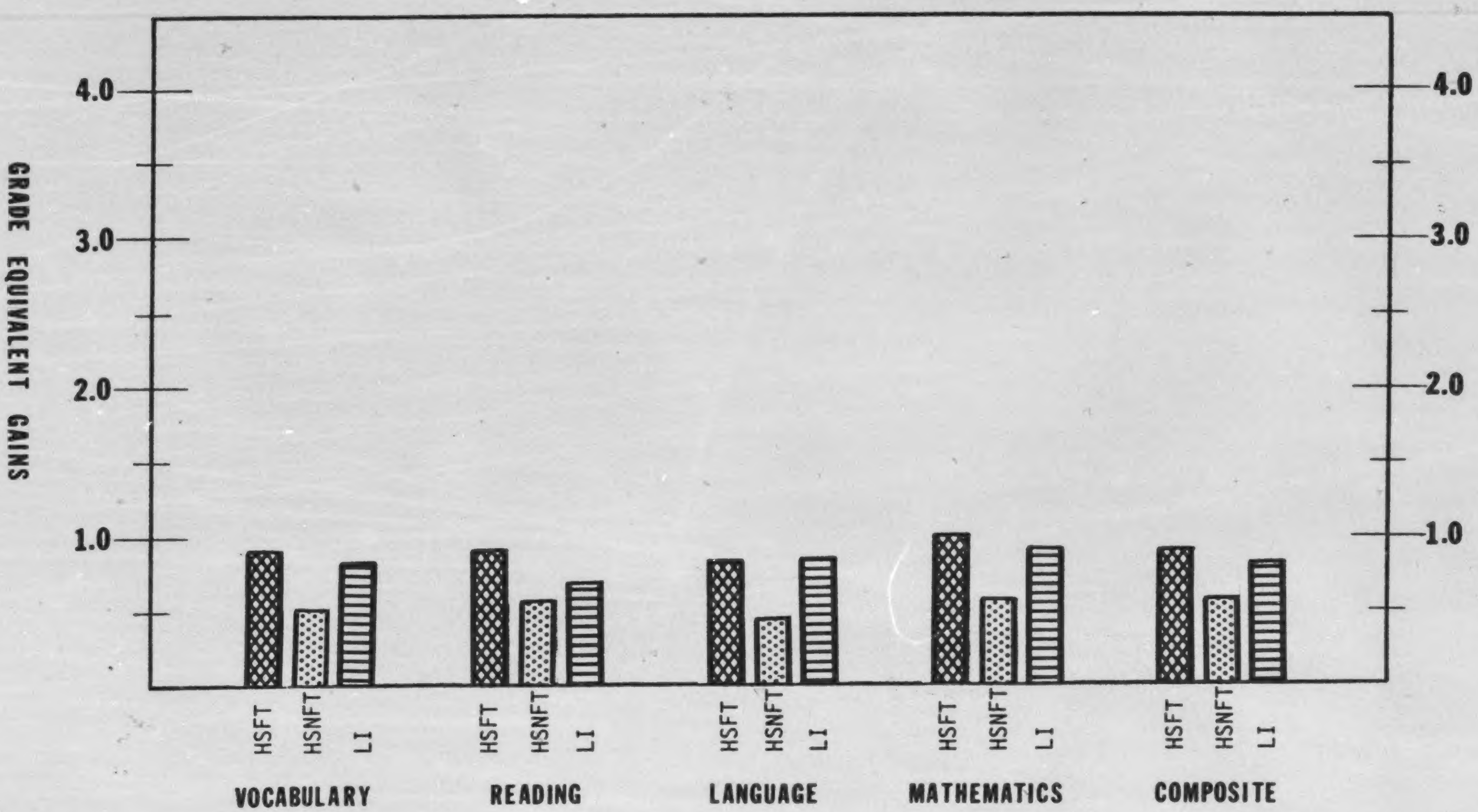


FIGURE 4.2

GRADE EQUIVALENT GAINS FOR **FTCL & NLI - 4th COHORT**
ITBS, APRIL 1975 - APRIL 1976
THIRD GRADE - FOURTH GRADE
(National Norm 1.0)

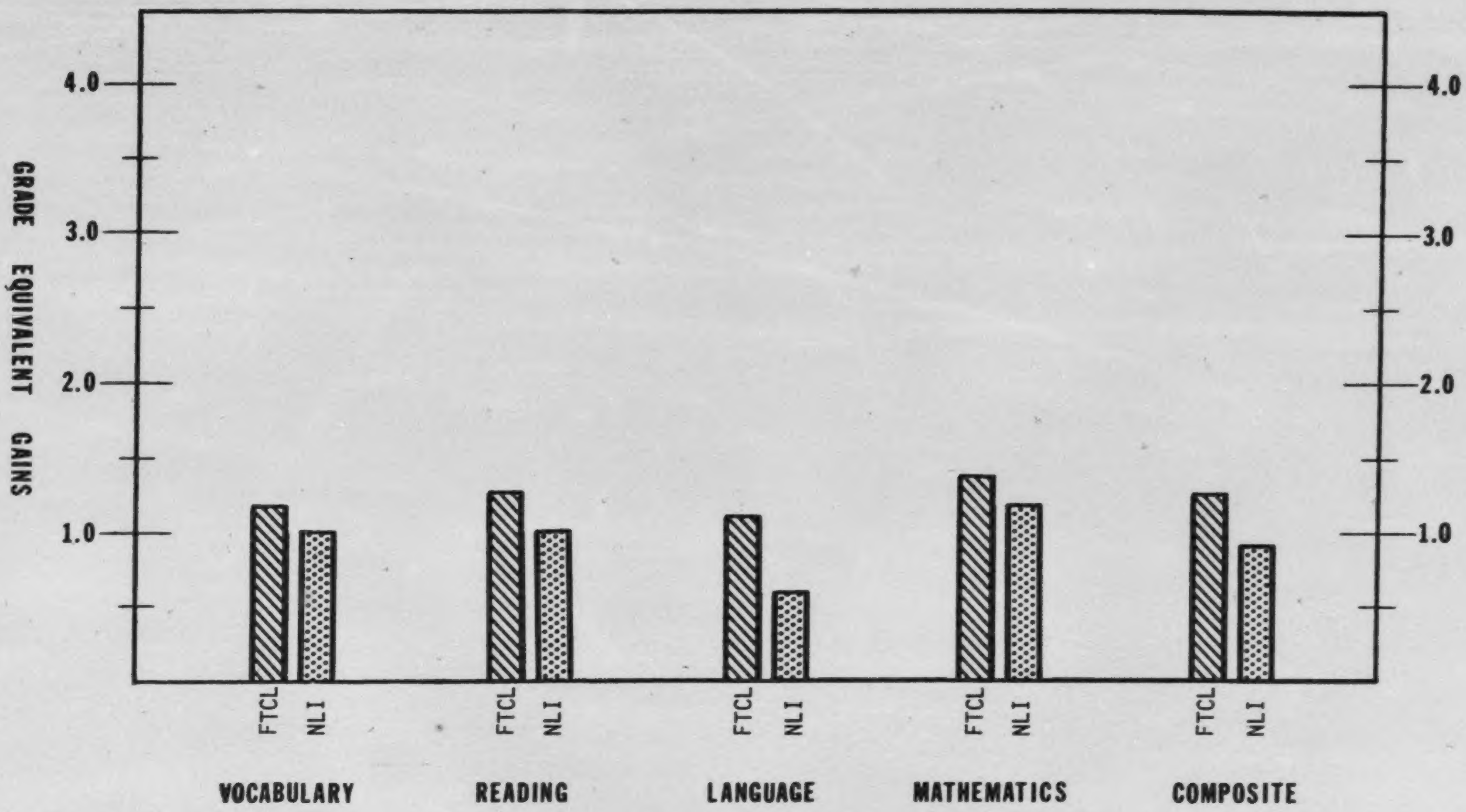


FIGURE 4.3

COMPARATIVE GRADE EQUIVALENTS FOR 4th COHORT HSFT, HSNFT, AND LI ON THE ITBS VOCABULARY SUBTEST

GRADES THREE AND FOUR

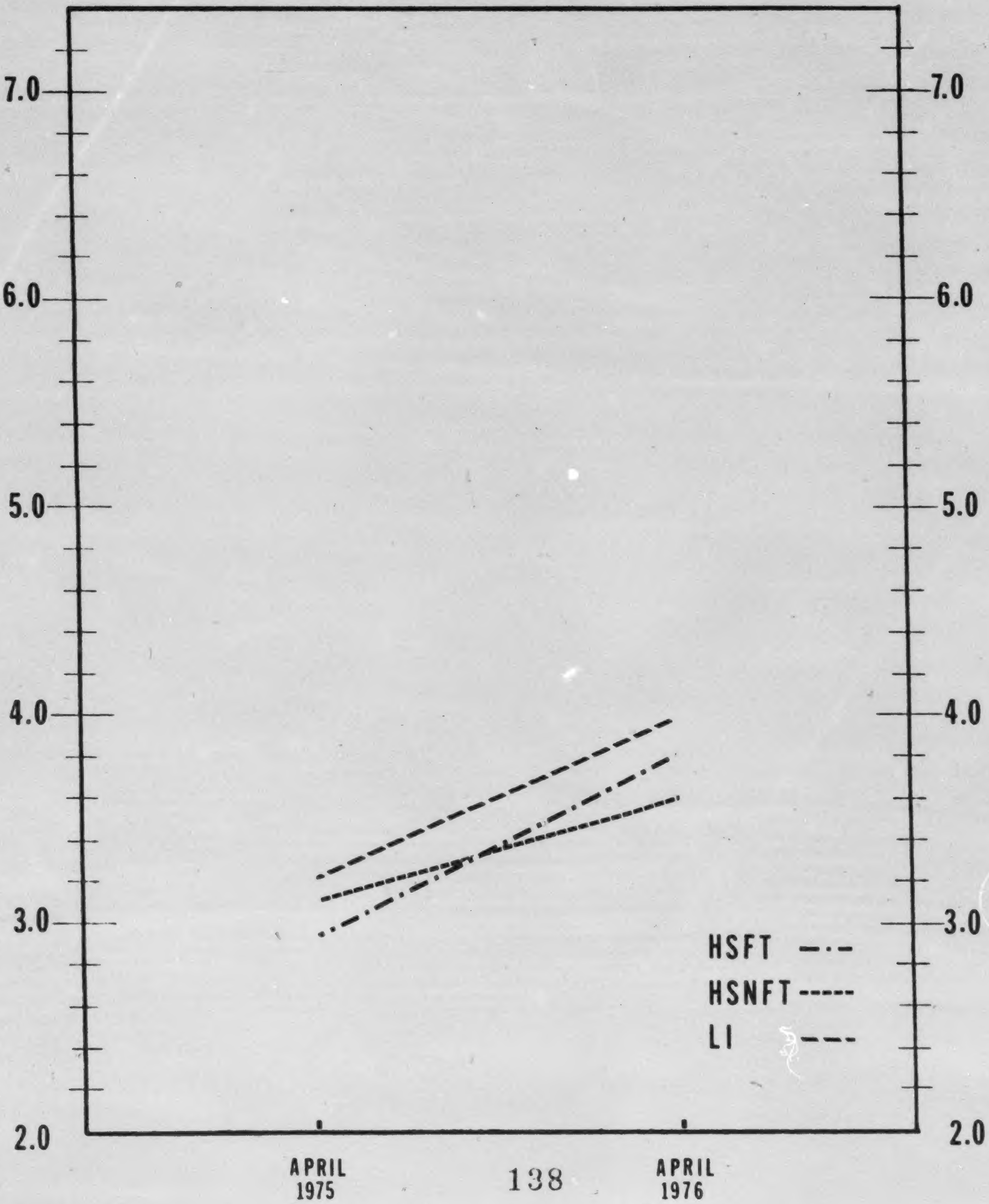


FIGURE 4.4

COMPARATIVE GRADE EQUIVALENTS FOR **4th** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **READING** SUBTEST

GRADES THREE AND FOUR

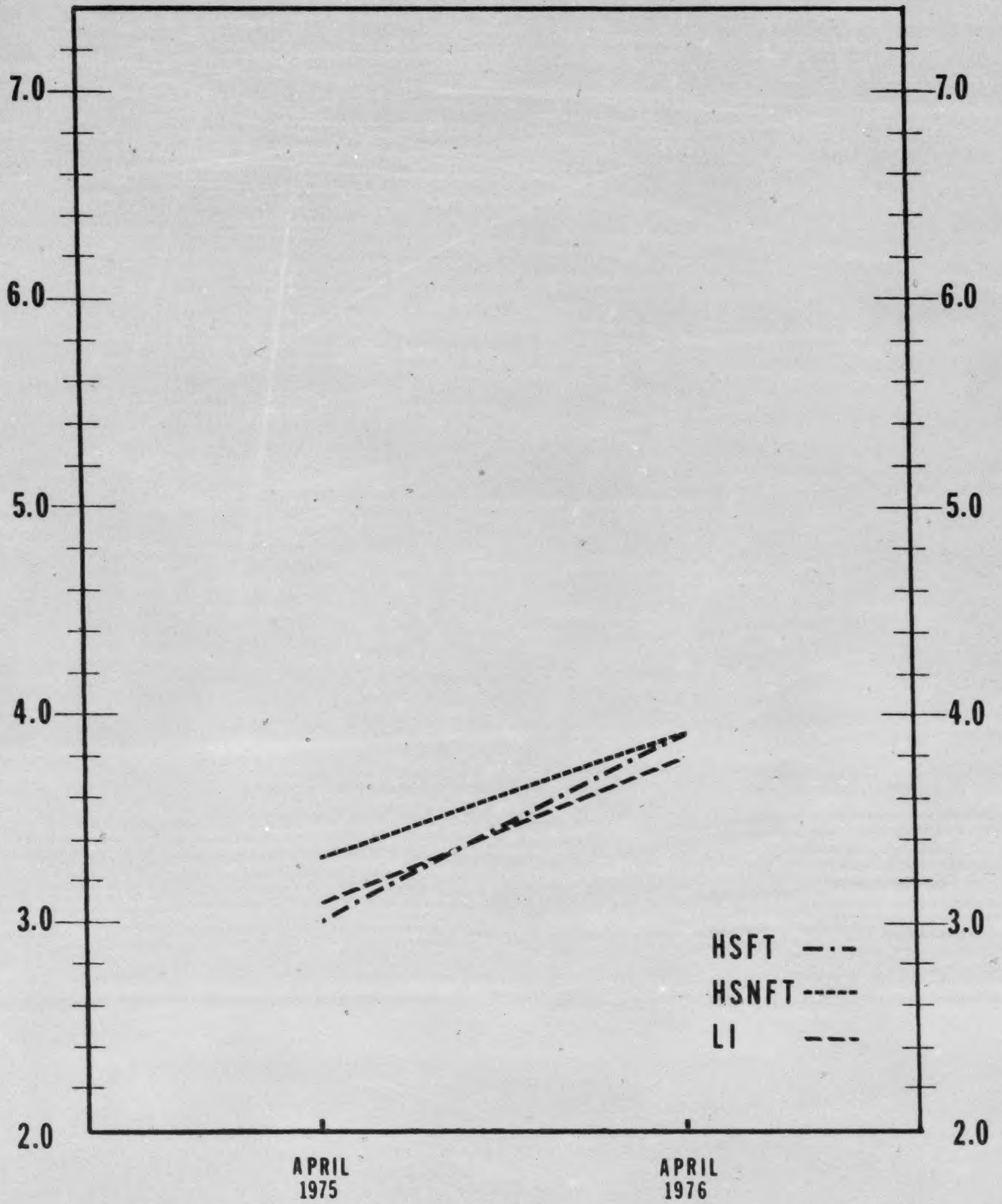


FIGURE 4.5

COMPARATIVE GRADE EQUIVALENTS FOR **4th** COHORT HSFT, HSNFT, AND LI ON THE ITBS **LANGUAGE** SUBTEST

GRADES THREE AND FOUR

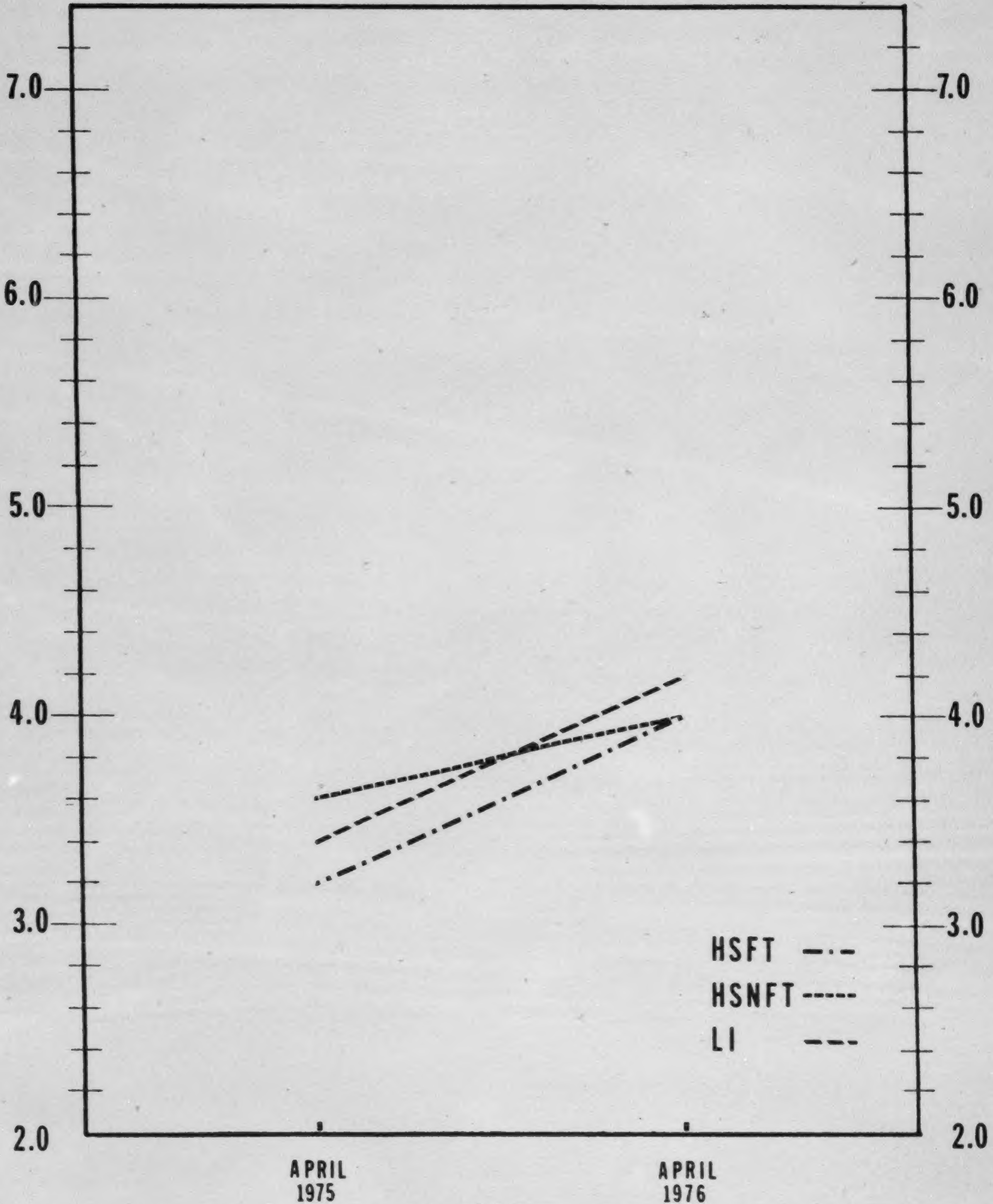


FIGURE 4.6

COMPARATIVE GRADE EQUIVALENTS FOR **4th** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **MATHEMATICS** SUBTEST

GRADES THREE AND FOUR

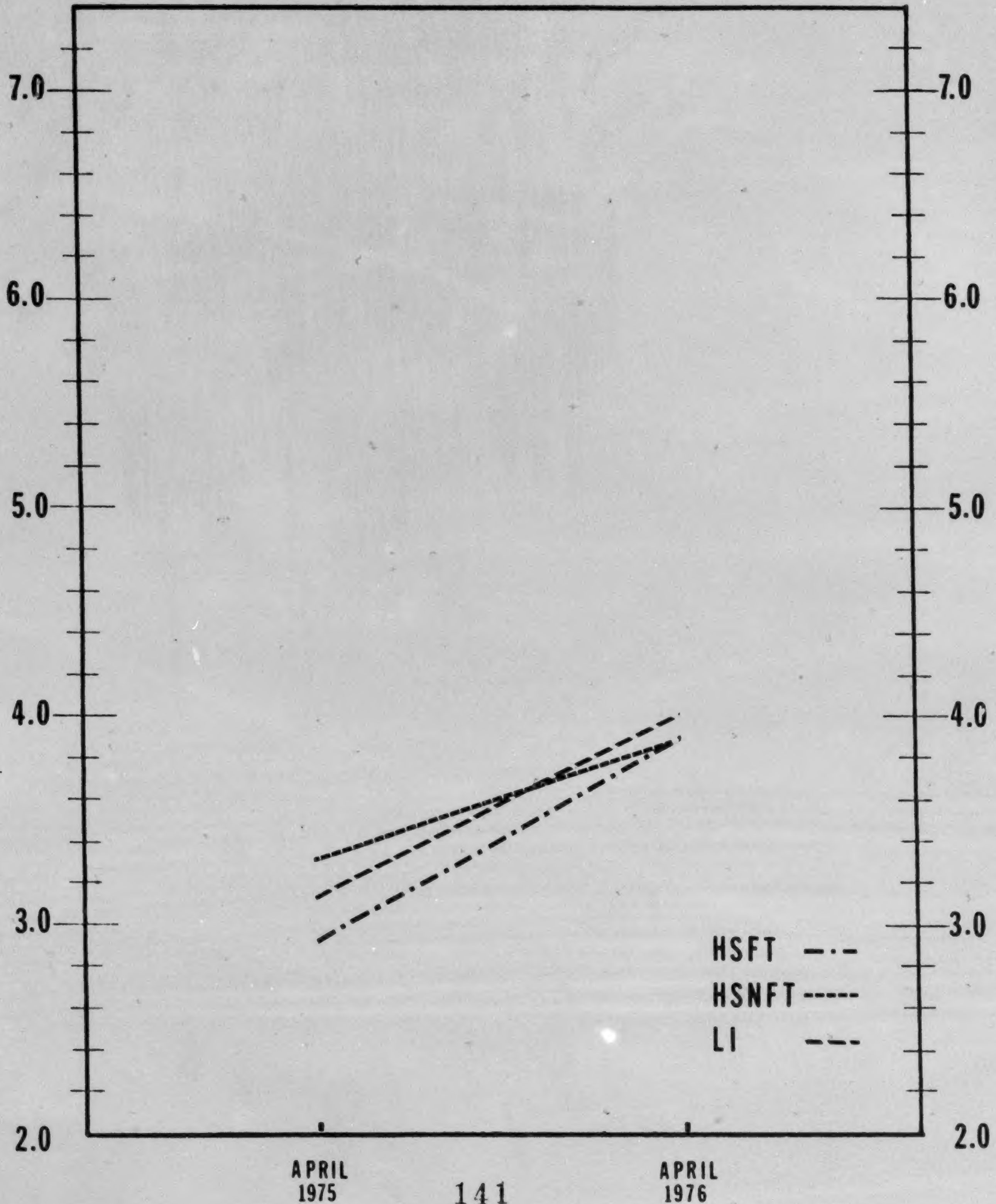


FIGURE 4.7

COMPARATIVE GRADE EQUIVALENTS FOR **4th** COHORT
HSFT, HSNFT, AND LI ON THE ITBS **COMPOSITE**

GRADES THREE AND FOUR

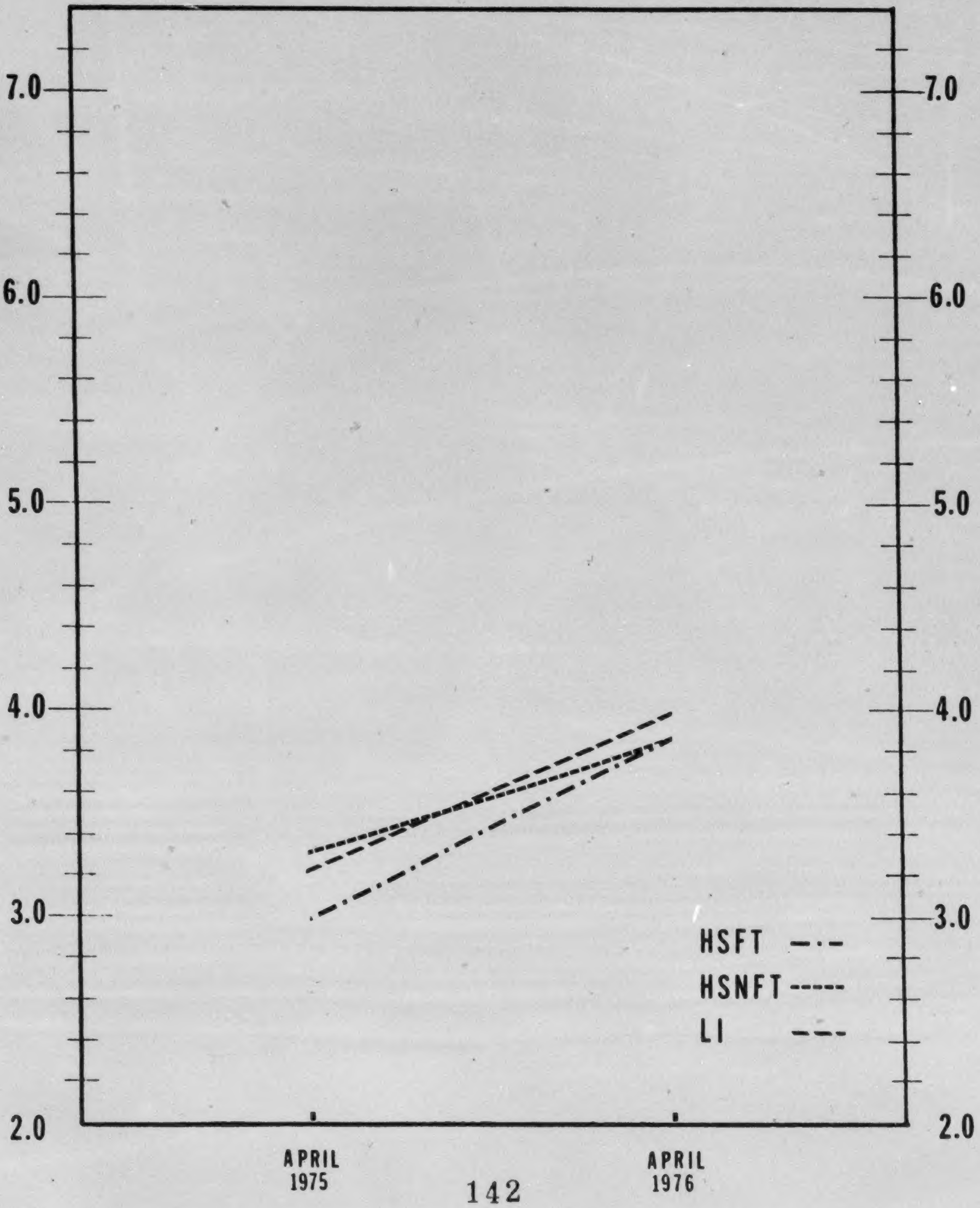


FIGURE 4.8

COMPARATIVE GRADE EQUIVALENTS FOR **4th** COHORT FTCL AND NLI ON THE ITBS **VOCABULARY** SUBTEST

GRADES THREE AND FOUR

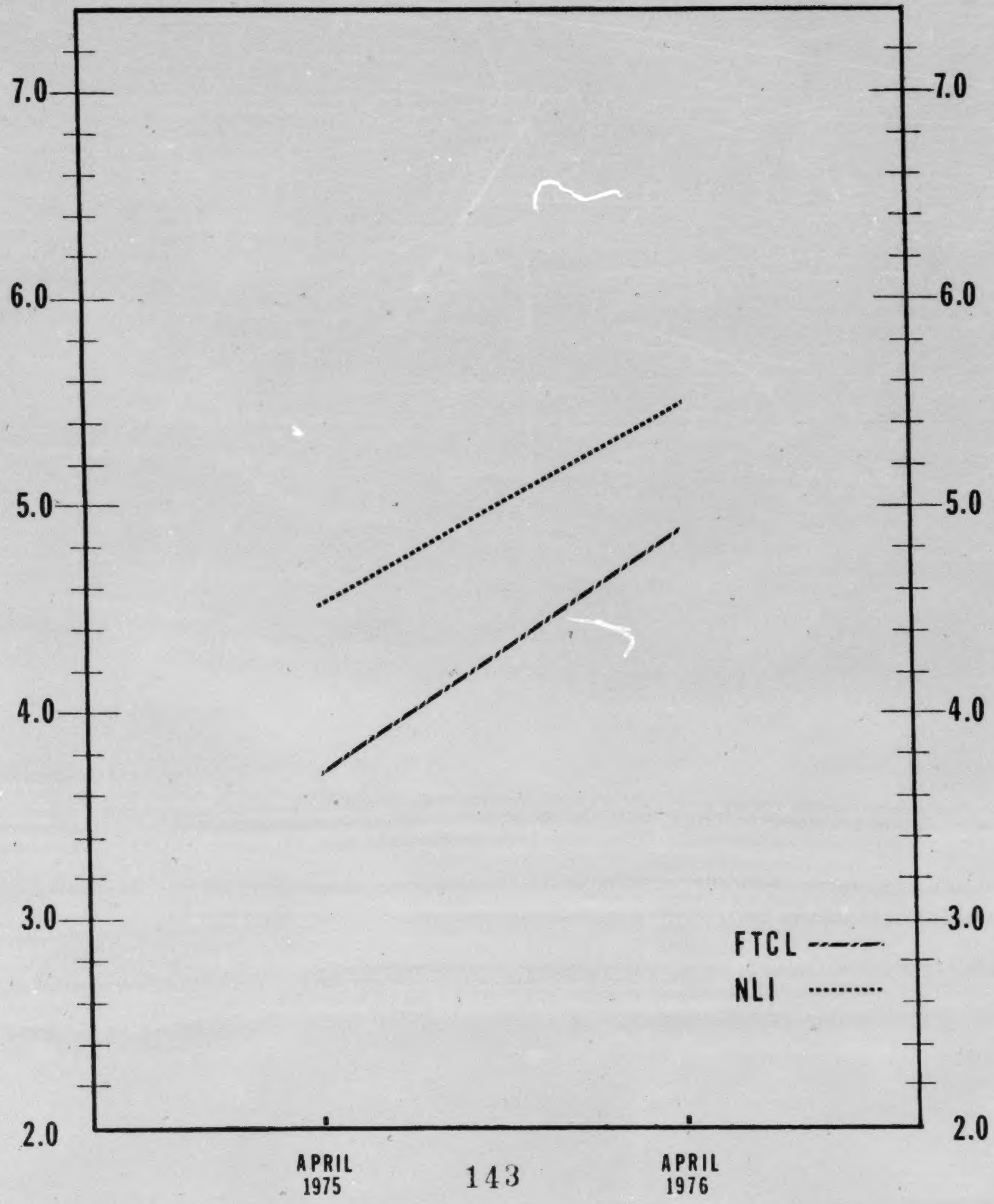


FIGURE 4.9

COMPARATIVE GRADE EQUIVALENTS FOR **4th** COHORT
FTCL AND NLI ON THE ITBS **READING** SUBTEST

GRADES THREE AND FOUR

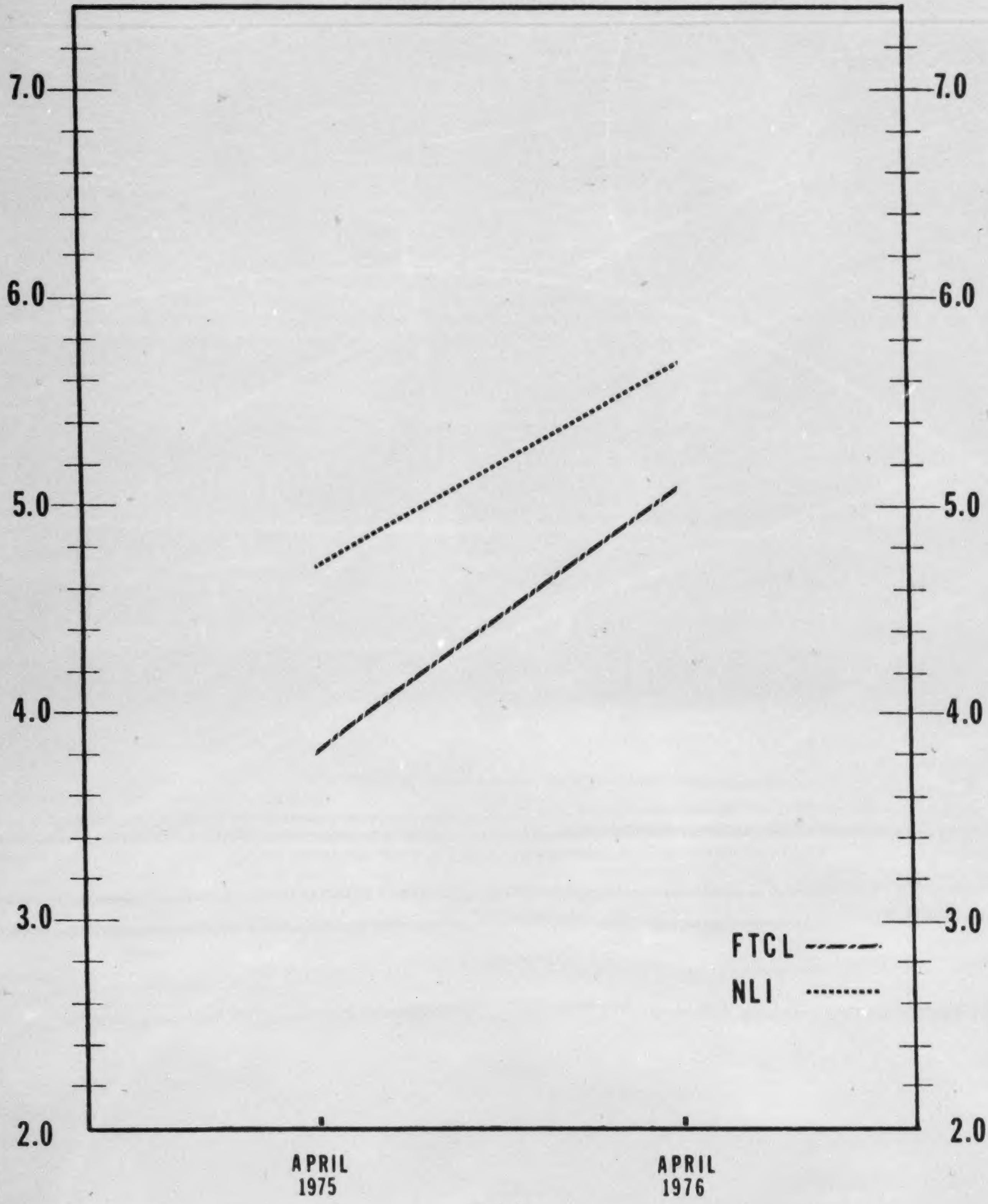


FIGURE 4.10

COMPARATIVE GRADE EQUIVALENTS FOR **4th** COHORT FTCL AND NLI ON THE ITBS **LANGUAGE** SUBTEST

GRADES THREE AND FOUR

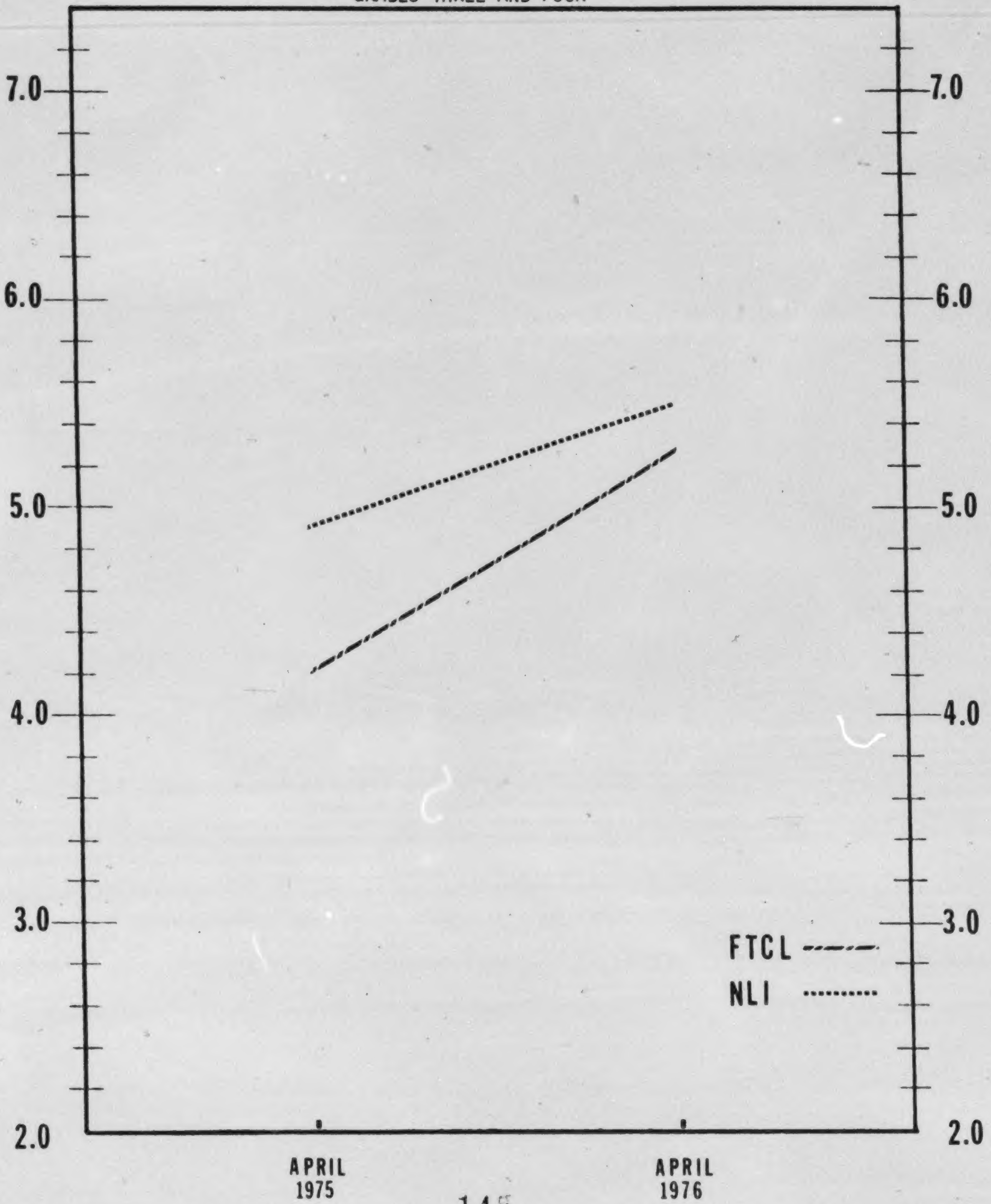


FIGURE 4.11

COMPARATIVE GRADE EQUIVALENTS FOR **4th** COHORT
FTCL AND NLI ON THE ITBS **MATHEMATICS** SUBTEST

GRADES THREE AND FOUR

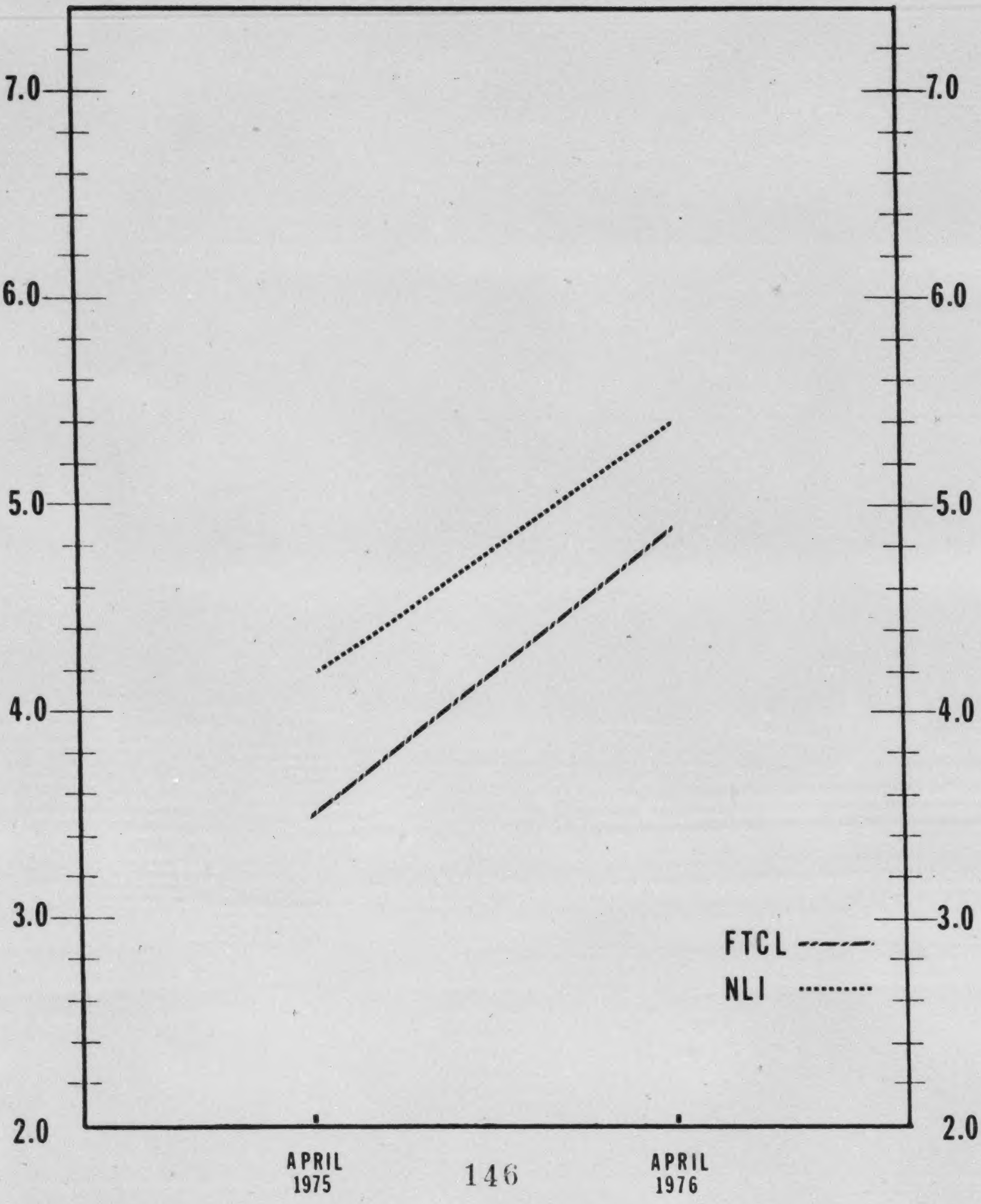
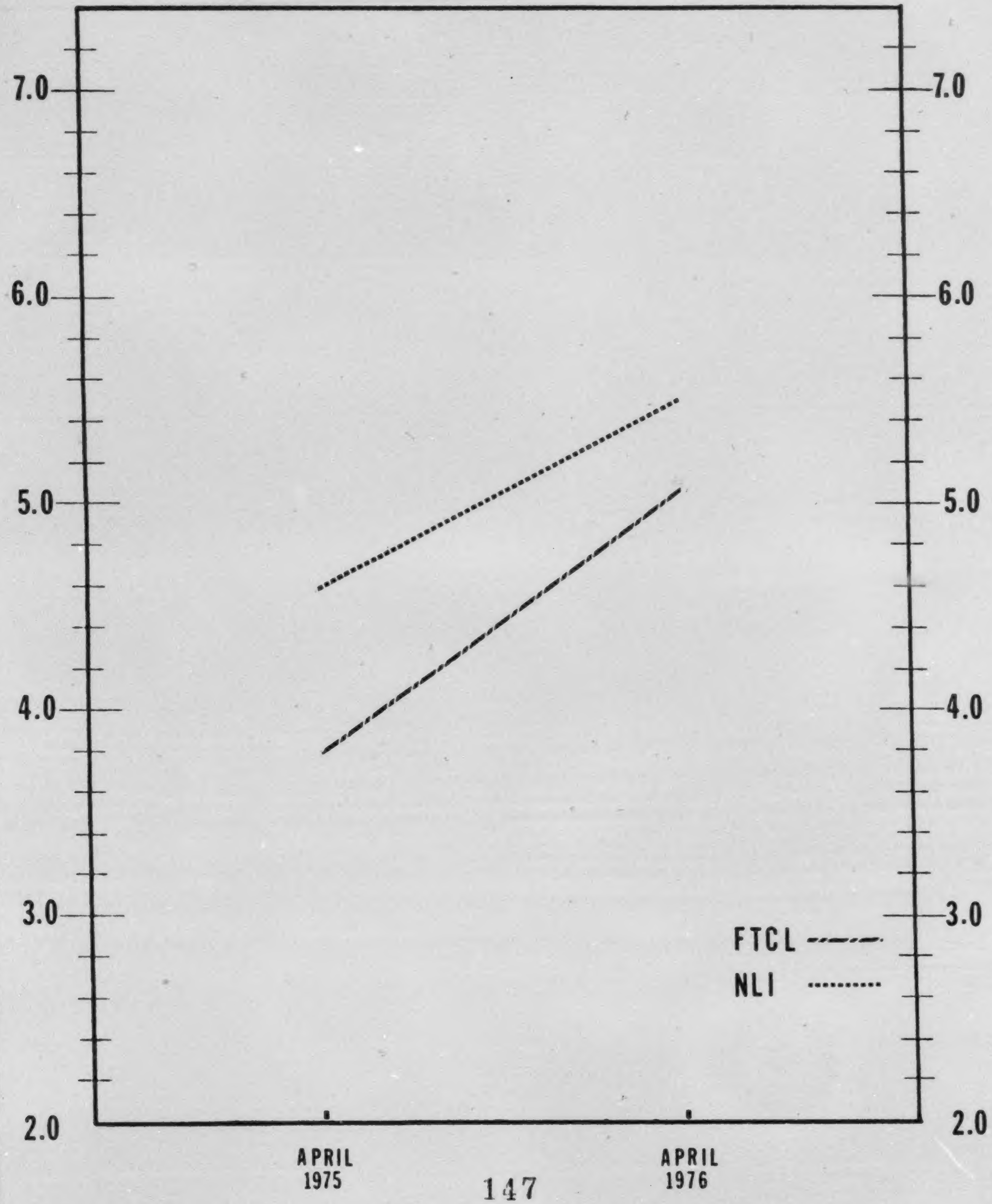


FIGURE 4.12

COMPARATIVE GRADE EQUIVALENTS FOR **4th** COHORT
FTCL AND NLI ON THE ITBS **COMPOSITE**

GRADES THREE AND FOUR



FOURTH COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE AND FOUR

April 1975 and April 1976

GRADE EQUIVALENT COMPARISONS

	HSFT - HSNFT		HSFT - LI		FTCL - NLI	
GRADE LEVEL	3	4	3	4	3	4
Subtests						
VOCABULARY	N	FT	N	N	N(s)	N
READING	N	E	N	FT	N(s)	N(s)
LANGUAGE	N	E	N	N	N(s)	N
WORK-STUDY	-	N	-	FT	-	N
MATHEMATICS	N(s)	E	N	N	N(s)	N
COMPOSITE	N	E	N	N	N(s)	N

KEY:
FT - Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E - Indicates the groups made equal grade equivalent scores.

N - Indicates the non-Follow Through group made the higher grade equivalent score.

(s) - Indicates the difference in group means was statistically significant. ($p \leq .05$)

FOURTH COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADES THREE AND FOUR

April 1975 and April 1976

GRADE EQUIVALENT GAINS

	HSFT - HSNFT	HSFT - LI	FTCL - NLI
GRADE LEVEL	3 - 4	3 - 4	3 - 4
Subtests			
VOCABULARY	FT(S)	FT	FT
READING	FT	FT	FT
LANGUAGE	FT	FT	FT(S)
WORK-STUDY	--	--	--
MATHEMATICS	FT(S)	FT	FT
COMPOSITE	FT(S)	FT	FT(S)

KEY:
FT - Indicates the Follow Through group (HSFT or FTCL) made the greater gain.

E - Indicates the groups made equal gains.

N - Indicates the non-Follow Through group made the greater gain.

(S) - Indicates the difference in group gains was statistically significant. ($p \leq .05$)

The Follow Through groups had higher gains than their comparison groups on all 12 subtests. Three of these were great enough to be statistically significant ($p \leq .05$).

While gaining more on all subtests, the low-income Follow Through group had higher grade equivalent scores on the fourth grade test than its comparison groups on two of the eight subtests. They had equal grade equivalents on three subtests, and lower grade equivalents on three subtests. The FTCL group had lower grade equivalents than NLI on all four subtests. The group was significantly lower ($p \leq .05$) on the Reading subtest.

FIFTH COHORT

Head Start	1971-72
Kindergarten	1972-73
First Grade	1973-74
Second Grade	1974-75
Third Grade (completed Follow Through Program)	1975-76

The Fifth Cohort took the ITBS in April 1976. Table 5.1 shows the mean scores, standard deviations, "t" statistic, and statistical significance of the difference in means on each subtest.

Tables 5.2 and 5.3 show the mean grade equivalent and percentile for each group on each subtest.

Figures 5.1 and 5.2 graphically compare the grade equivalents for the groups on each subtest.

The low-income group, LI, in each previous cohort were those pupils who were on the waiting list for Head Start. Since the expansion of other preschool programs such as Title I, there has not been a waiting list. Therefore, this and subsequent cohorts do not have this comparison group.

TABLE 5.1

RESULTS FOR HSFT, HSNFT, FTCL, AND NLI ON THE IOWA TESTS OF BASIC SKILLS

FIFTH COHORT
April 1976
Third Grade

VOCABULARY

	HSFT	HSNFT	FTCL	NLI
N	48	37	41	42
$\bar{x}$	29.17	32.97	43.00	44.17
s	7.63	9.47	7.86	7.61
t	1.9715 NSD		0.6784 NSD	

READING COMPREHENSION

	HSFT	HSNFT	FTCL	NLI
N	48	37	41	42
$\bar{x}$	30.67	33.73	43.41	45.17
s	9.52	12.36	10.60	9.84
t	1.2331 NSD		0.7707 NSD	

LANGUAGE SKILLS

	HSFT	HSNFT	FTCL	NLI
N	48	37	41	42
$\bar{x}$	38.33	37.24	48.17	52.10
s	10.61	15.75	9.67	6.90
t	0.3577 NSD		2.0977 Sig. at .05	

TABLE 5.1 (cont'd)

April 1976
Third Grade

MATHEMATICS SKILLS

	HSFT	HSNFT	FTCL	NLI
N	48	37	41	42
$\bar{x}$	33.21	30.24	40.93	40.43
s	8.09	9.66	7.83	7.33
t	1.4855 NSD		0.2955 NSD	

COMPOSITE

	HSFT	HSNFT	FTCL	NLI
N	48	37	41	42
$\bar{x}$	33.31	33.65	43.83	45.55
s	7.38	10.26	7.96	6.72
t	0.1664 NSD		1.0486 NSD	

TABLE 5.2

GRADE EQUIVALENTS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **HSFT & HSNFT » 5th COHORT**

	FORM 5, LEVEL 9 April, 1976: Grade 3 **HSFT** N=48		FORM 5, LEVEL 9 April, 1976: Grade 3 **HSNFT** N=37	
	G.E.	%ile	G.E.	%ile
VOCABULARY	2.9	28	3.3	38
READING COMPREHENSION	3.1	32	3.4	41
LANGUAGE SKILLS	3.8	54	3.7	51
MATHEMATICS SKILLS	3.3	36	3.0	24
COMPOSITE	3.3	38	3.4	42

NATIONAL GRADE EQUIVALENT NORM IS 3.8

TABLE 5.3

GRADE EQUIVALENTS AND PERCENTILES ON THE IOWA TESTS OF BASIC SKILLS FOR **FTCL & NLI » 5th COHORT**

NATIONAL GRADE EQUIVALENT NORM IS 3.8

	FORM 5, LEVEL 9 April, 1976: Grade 3 **FTCL** N=41		FORM 5, LEVEL 9 April, 1976: Grade 3 **NLI** N=42	
	G.E.	%ile	G.E.	%ile
VOCABULARY	4.3	69	4.4	72
READING COMPREHENSION	4.3	66	4.5	71
LANGUAGE SKILLS	4.8	77	5.2	85
MATHEMATICS SKILLS	4.1	67	4.0	63
COMPOSITE	4.4	73	4.6	79

FIGURE 5.1

COMPARATIVE GRADE EQUIVALENTS FOR **HSFT & HSNFT - 5th COHORT**
ITBS, APRIL 1976
GRADE THREE
(National Norm 3.8)

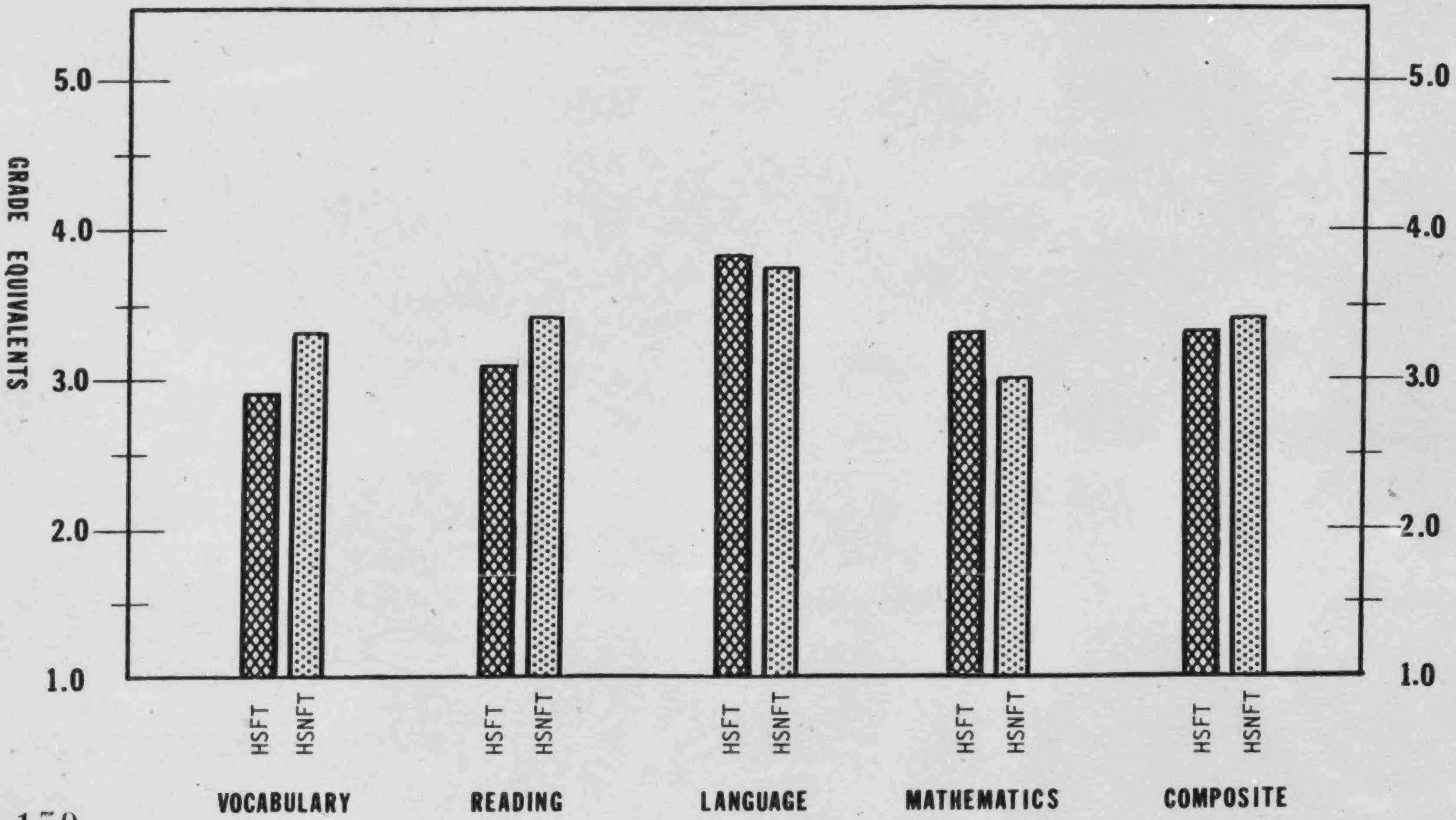
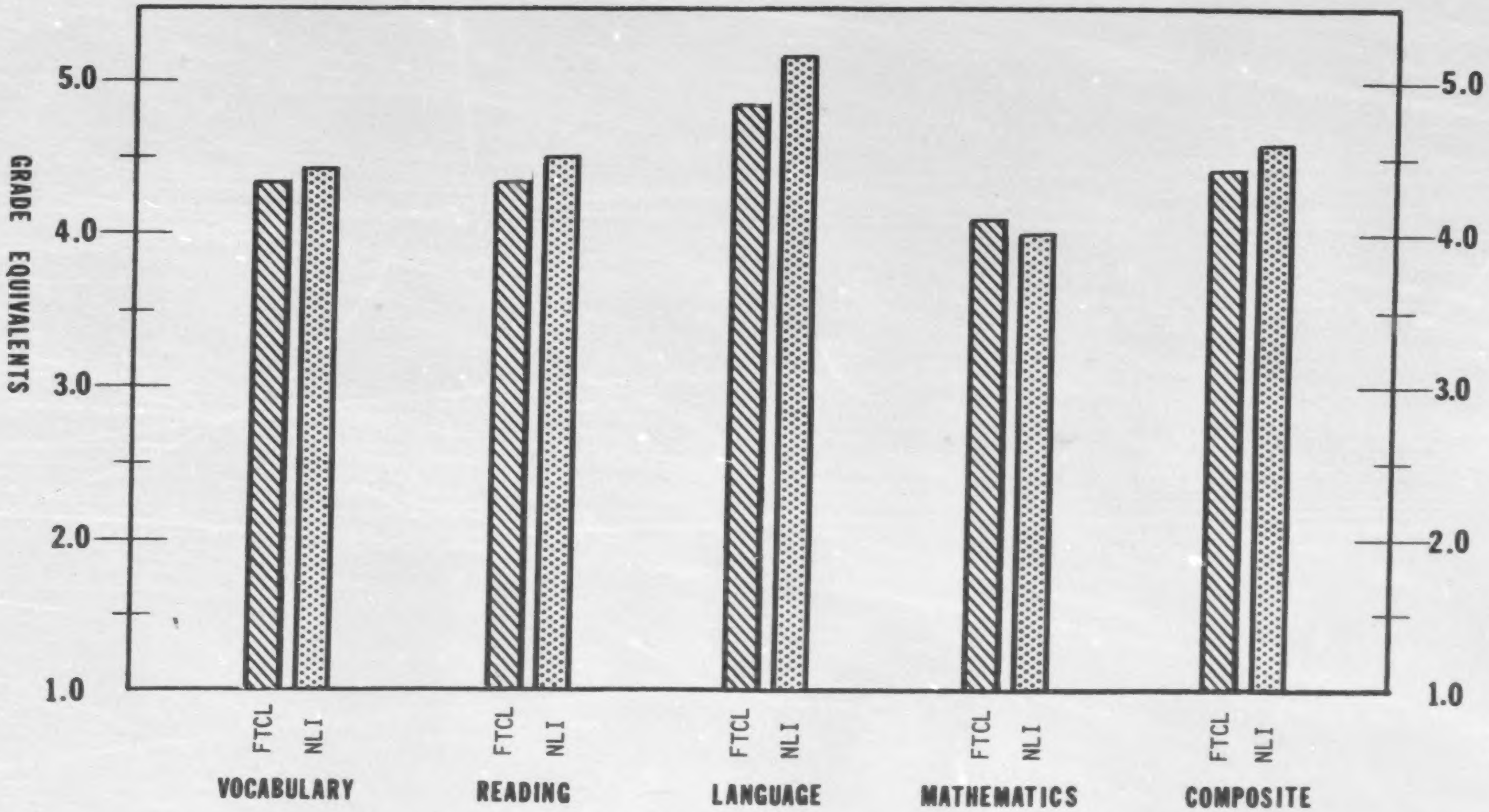


FIGURE 5.2

COMPARATIVE GRADE EQUIVALENTS FOR **FTCL & NLI - 5th COHORT**
ITBS, APRIL 1976
GRADE THREE
(National Norm 3.8)



FIFTH COHORT

SUMMARY RESULTS OF THE IOWA TESTS OF BASIC SKILLS

GRADE THREE
April 1976

GRADE EQUIVALENT COMPARISONS

Subtests	HSFT - HSNFT	FTCL - NLI
VOCABULARY	N	N
READING	N	N
LANGUAGE	FT	N(S)
MATHEMATICS	FT	FT
COMPOSITE	N	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E - Indicates the groups made equal grade equivalent scores.

N - Indicates the non-Follow Through group made the higher grade equivalent score.

(S) - Indicates the difference in group means was statistically significant. ($p \leq .05$)

The low-income group, HSFT, scored higher grade equivalents than the comparison group, HSNFT, on two subtests of the third grade ITBS (Language and Mathematics). The FTCL group scored a higher grade equivalent than the NLI comparison group on the Mathematics subtest, but scored lower on the other three subtests. FTCL scored significantly lower ($p \leq .05$) on the Language subtest.

SIXTH COHORT

Head Start	1972-73
Kindergarten	1973-74
First Grade	1974-75
Second Grade	1975-76

The Sixth Cohort took the Metropolitan Achievement Tests (MAT) in October 1975. Table 6.1 shows the raw score mean, standard deviation, "t" statistic, and statistical significance of the difference in means on each subtest.

Tables 6.2 and 6.3 show the mean grade equivalent and percentile for each group on each subtest.

TABLE 6.1

METROPOLITAN ACHIEVEMENT TEST RESULTS
HSFT, HSNFT, FTCL, AND NLI - SIXTH COHORT

PRIMARY I, FORM F
October, 1975: Grade 2

WORD KNOWLEDGE

	HSFT	HSNFT	FTCL	NLI
N	72	133	60	81
RS $\bar{x}$	24.18	26.11	28.42	29.75
s	8.18	7.70	5.91	6.24
t	1.6372 NSD		1.2870 NSD	

WORD ANALYSIS

	HSFT	HSNFT	FTCL	NLI
N	72	133	60	81
RS $\bar{x}$	26.42	28.02	31.37	32.81
s	8.25	8.57	6.95	7.00
t	1.2981 NSD		1.2109 NSD	

READING

	HSFT	HSNFT	FTCL	NLI
N	72	133	60	81
RS $\bar{x}$	20.86	24.78	24.47	30.75
s	10.10	10.49	11.24	10.50
t	2.6019 Sig. at .01		3.3522 Sig. at .01	

TABLE 6.1 (cont'd)

October, 1975: Grade 2

TOTAL READING

	HSFT	HSNFT	FTCL	NLI
N	72	133	60	81
RS $\bar{x}$	45.04	50.90	52.88	60.56
s	16.36	17.10	15.06	15.83
t	2.3958 Sig. at .02		2.9049 Sig. at .01	

TOTAL MATHEMATICS

	HSFT	HSNFT	FTCL	NLI
N	72	133	60	81
RS $\bar{x}$	30.42	37.74	40.90	43.86
s	10.40	11.48	11.62	9.89
t	4.6105 Sig. at .001		1.5818 NSD	

TABLE 6.2

GRADE EQUIVALENTS AND PERCENTILES ON THE METROPOLITAN ACHIEVEMENT TESTS FOR **HSFT & HSNFT » 6th COHORT**

	PRIMARY I, FORM F October, 1975: Grade 2 **HSFT** N=72		PRIMARY I, FORM F October, 1975: Grade 2 **HSNFT** N=133	
	G.E.	%ile	G.E.	%ile
WORD KNOWLEDGE	1.8	32	1.9	40
WORD ANALYSIS	1.7	24	1.8	28
READING	1.8	34	1.9	42
TOTAL READING	1.9	34	2.0	42
TOTAL MATHEMATICS	1.4	16	1.7	30

NATIONAL GRADE EQUIVALENT NORM IS 2.1

TABLE 6.3

GRADE EQUIVALENTS AND PERCENTILES ON THE METROPOLITAN ACHIEVEMENT TESTS FOR
FTCL & NLI » 6th COHORT

PRIMARY I, FORM F
October, 1975: Grade 2
FTCL
N=60

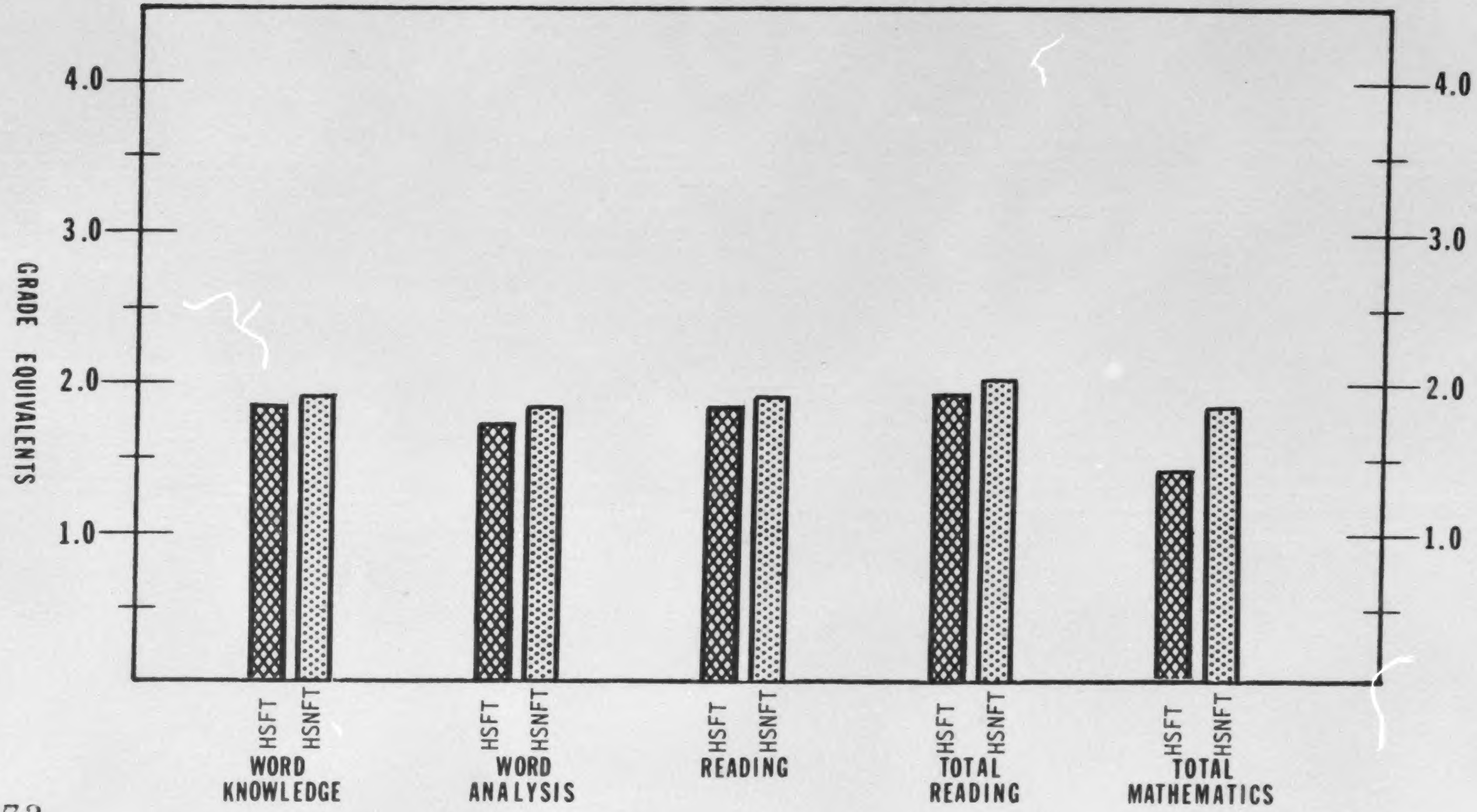
PRIMARY I, FORM F
October, 1975: Grade 2
NLI
N=81

NATIONAL GRADE EQUIVALENT NORM IS 2.1

	G.E.	%ile	G.E.	%ile
WORK KNOWLEDGE	2.0	48	2.2	56
WORD ANALYSIS	1.9	34	2.0	42
READING	1.8	38	2.1	50
TOTAL READING	2.0	42	2.2	56
TOTAL MATHEMATICS	1.9	38	2.0	46

FIGURE 6.1

GRADE EQUIVALENT COMPARISONS FOR **HSFT & HSNFT - 6th COHORT**
METROPOLITAN ACHIEVEMENT TEST, PRIMARY I, FORM F
OCTOBER 1975, Grade 2
(National Norm 2.1)

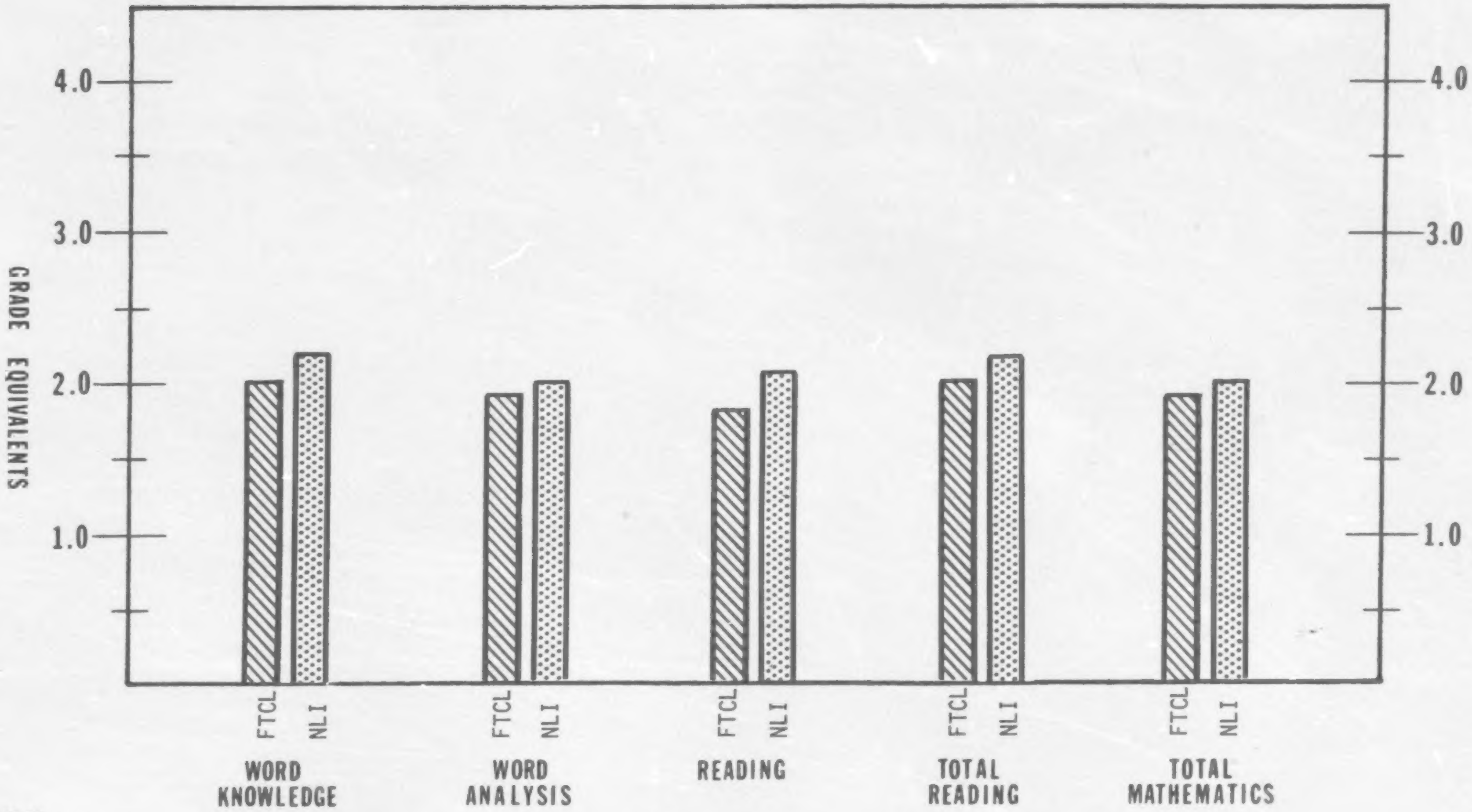


173

174

FIGURE 6.2

GRADE EQUIVALENT COMPARISONS FOR **FTCL & NLI - 6th COHORT**
METROPOLITAN ACHIEVEMENT TEST, PRIMARY I, FORM F
OCTOBER 1975, GRADE 2
(National Norm 2.1)



SIXTH COHORT

SUMMARY RESULTS OF THE METROPOLITAN ACHIEVEMENT TESTS

GRADE TWO
October, 1975

GRADE EQUIVALENT COMPARISONS

	HSFT - HSNFT	FTCL - NLI
Subtests		
WORD KNOWLEDGE	N	N
WORD ANALYSIS	N	N
READING	N$^{(s)}$	N$^{(s)}$
TOTAL READING	N$^{(s)}$	N$^{(s)}$
TOTAL MATHEMATICS	N$^{(s)}$	N

KEY: FT - Indicates the Follow Through group (HSFT or FTCL) made the higher grade equivalent score.

E - Indicates the groups made equal grade equivalent scores.

N - Indicates the non-Follow Through group made the higher grade equivalent score.

(s) - Indicates the difference in group means was statistically significant. ($p \leq .05$)

Table 6.1 indicates that the HSFT group scored lower than its comparison group on all subtests of the MAT. The HSFT group scored significantly lower on Reading, Total Reading, and Total Mathematics.

The FTCL group scored lower than its comparison group (NLI) on all subtests. They scored significantly lower on Reading and Total Reading.

Some studies have show that Follow Through children as a group have better attendance than comparable groups of non-Follow Through children. Mean attendance computations for this cohort indicate little difference in the attendance of Follow Through children and the non-Follow Through comparison groups. The mean attendance for each group is given below.

N= 80 HSFT $\bar{x}$ attendance = 166.79 days present
N=140 HSNFT $\bar{x}$ attendance = 166.34 days present

N= 71 FTCL $\bar{x}$ attendance = 171.56 days present
N= 81 NLI $\bar{x}$ attendance = 170.10 days present

(180 days possible)

SEVENTH COHORT

Head Start	1973-74
Kindergarten	1974-75
First Grade	1975-76

The Seventh Cohort took the Metropolitan Readiness Test (MRT) in September of the first grade. The scores for the Follow Through groups and and their comparison groups are given in Table 7.1 The MRT scores are reported in total raw scores and percentiles.

As shown in Table 7.1 and the summary chart on page 133, the low-income Follow Through group, HSFT, scored slightly higher than its comparison group, HSNFT. The Follow Through Classmates group, FTCL, scored slightly lower than its comparison group, NLI. The differences in raw score means between the Follow Through groups and their respective comparison groups were not significant.

TABLE 7.1

METROPOLITAN READINESS TEST RESULTS
HSFT, HSNFT, FTCL, AND NLI - SEVENTH COHORT

September, 1975
First Grade

	HSFT	HSNFT	FTCL	NLI
N	65	74	48	115
RS $\overline{x}$	58.68	56.30	68.71	70.64
s	13.87	16.06	14.74	11.73
%ile	57	53	79	83
t	0.8164 NSD		0.8014 NSD	

SEVENTH COHORT

SUMMARY RESULTS OF THE METROPOLITAN READINESS TEST

GRADE ONE
September, 1975

HSFT - HSNFT	FTCL - NLI
FT	N

KEY:

FT - Indicates the Follow Through group (HSFT or FTCL) made the higher score.

E - Indicates the group made equal scores.

N - Indicates the non-Follow Through group made the higher score.

(S) - Indicates the difference in group means was statistically significant. ($p \leq .05$)

EIGHTH COHORT

Head Start	1974-75
Kindergarten	1975-76

The basic testing program for the school district does not include kindergarten, therefore test data are not available for this Eighth Cohort.

PARENT PARTICIPATION

PARENT PARTICIPATION TOTALS FOR ALL COHORTS

1975-76

	HSFT	FTCL
Attendance at PAC Meetings - 36 meetings	230	173
Attendance at Parent Activities - 49 meetings	267	304
Parent Visits to School		
Conference with teacher	205	292
Observer of classroom activities, drop in, etc.	281	469
Volunteer in classroom or other activities	148	272
Attend Open House	72	304
Teaching Staff Parent Contacts		
Home visit completed during school day	829	705
Home visit completed other than school day	43	60
Home visit attempted	139	48
School conference	299	498
Phone conference	84	65
Conference at another place	29	13

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